DyMac GLOBAL

POWER GENERATION



Model:

MPIR-RT-YM20MVSV

MacPower
Industrial Rental Road Tow

MODEL : MPIR-RT-YM20MVSV



Overview

The DyMac MacPower Industrial Rental Range of EU Stage V Multi-Voltage Generator sets come equipped with a Yanmar Engine and Mecc Alte Alternator and have been specifically designed to meet the rigours of the Rental and Construction Industries worldwide. The overall Generator design is robust, compact and hard wearing. The base frame has an integral 110% bunded fuel tank and comes complete with removable bolted forklift pockets.

The DyMac MPIR has a Silent Acoustic Canopy, designed to achieve maximum noise level reduction as well as efficient cooling of the engine ensuring its full rating is achieved under full load operation.

The Exhaust Silencer is a residential type and mounted internally. The canopy is made of carbon steel sheet pretreated prior to being powder coated and is suitable for use in arduous environments. Its strong structure is fully bolted and all panels can be easily and individually removed.

The Generator package is mounted on a class-leading KNOTT single-axle, German manufactured road tow trailer, the generator is purpose-built to meet the rigorous demands of the equipment rental industry.

Power Rating

Emergency Standby Power ESP @400V	20.7 kVA/16.5 kW
Emergency Standby Power ESP @230/115V	19.4 kVA/15.5 kW
Prime power PRP @400V	19.2 kVA/15.5 kW
Prime power PRP @230/115V	18.0 kVA/14.4 kW
Frequency	50Hz
Voltage	115V/230V/400V (Multi-Voltage)
Phases	1&3 (Multi-Phase)
Power Factor	0.8 cos Φ
Rated Current at 115 V- (A/Ph)	157A
Rated Current at 230 V- (A/Ph)	78A
Rated Current at 400 V- (A/Ph)	30A
Fuel	Diesel
[50Hz] Exhaust Emission Level	EU Stage V



Engine Specifications

Engine Brand	Yanmar
Model	4TNV88-B
Engine Cooling System	Water Cooled
No. of Cylinder and Disposition	4
Displacement	2190cm³
Aspiration	Natural - Direct Injection
Speed Governor	Mechanical
Coolant Capacity	7.4L
Electric Circuit	12V
Fuel	Diesel

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Engine Data	50Hz
[50Hz] Operating Speed-Nominal	1500 rpm
[50Hz] Exhaust Emission Level	Stage V
[50Hz] Specific Fuel Consumption 75% PRP	4.2L/h



Alternator Specifications

Alternator	Meccalte
Model	ECP 28-VL4 C
Type	Brushless (Shunt), Self-Excited System
Class	H
IP Protection	23
Insulation Protection Systems	Protection System 1
Poles	4
Winding Leads	12
Voltage Regulation System	Electronic
Voltage Tolerance	±1%



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Fuel Tank Autonomy

Fuel Tank Location	Internal
Fuel Tank Material	Carbon steel
Fuel Tank Capacity	85L
[50Hz 400V] Fuel Consumption 75% PRP	4.2L/h
[50Hz 400V] Running Time 75% PRP	21H
[50Hz 400V] Fuel Consumption 100% PRP	5.8L/h
[50Hz 400V] Running Time 100% PRP	14.7H

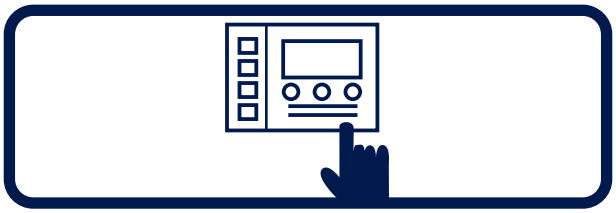


Control System

Controller Brand	Deepsea
Model	DSE G4501
Module	Manual/Auto start/stop module
Standard Function	Engine control
	Generator monitoring
	Generator protection
	Specification
Display	Frequency
	Battery voltage
	Running hour
Warning/shutdown	Under/over voltage
	Under/over speed
	Under/over frequency
	Low oil pressure
	High water temperature
Communication Port	USB/CAN Port/RS485 Port
Voltage Selector Switch	Three position 400v/230v/115v Rotary Voltage Selector Switch

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Automatic Control Panel	ACP - Standard
Synchronizing Control Panel	SCP - Optional



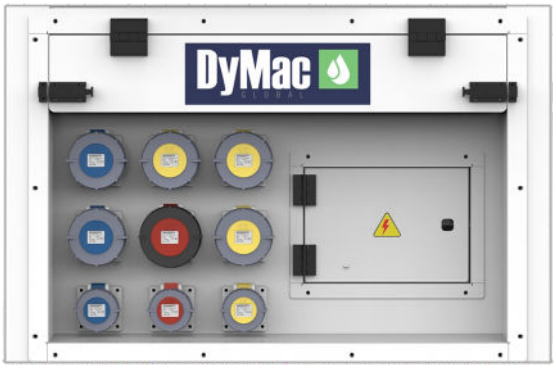




Voltage Regulator Switch

Sockets Module

Protection	Protected with RCBOs
Differential Sensivity	30 (only for 16A and 32A) mA
Sockets	1 x 16A 115V 3P P/SKT IP67
Sockets	3 x 32A 115V 3P P/SKT IP67
Sockets	1 x 16A 230V 5P P/SKT IP67
Sockets	2 x 32A 230V 5P P/SKT IP67
Sockets	1 x 16A 400V 5P P/SKT IP67
Sockets	1 x 32A 400V 5P P/SKT IP67



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Genset Equipment

Canopy

The DyMac MPIR has a silent canopy, designed to achieve maximum noise level reduction as well as a perfect cooling of the engine insuring its full rating is achieved under full load conditions.



Base Frame

Heavy duty base guarantees the highest standards of durability and resistance, painted using a high quality powder coating process.

Fully bunded, able to retain 110% of all the sets fluids, the base frame is provided with removable (bolt off / bolt on) fork pockets for easy maneuverability and site positioning.

Single Lifting Point

Manual Battery Isolator Switch

Earth Rod (Optional)

Document Holder

Hot Parts Protections



Lube Oil Drain Pump (Manual)

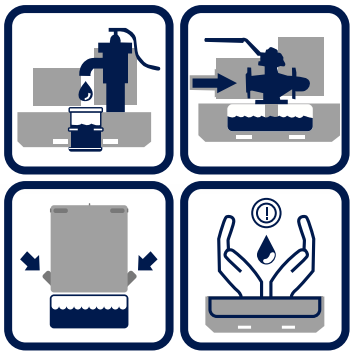
Fuel Valve (3 Way)

System designed for quick connection to external bulk fuel tank.

Fuel Tank (110% bunded)

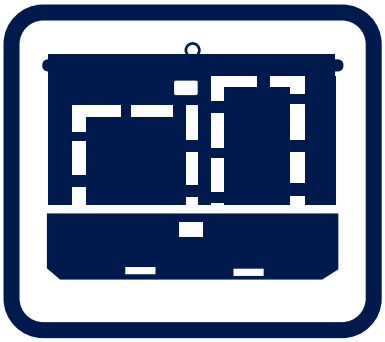
Heavy Duty Water Separator Fuel Filter (Optional)

Micro-Switch are located at the buzz bar door and main breaker door for emergency shut down



Canopy Version

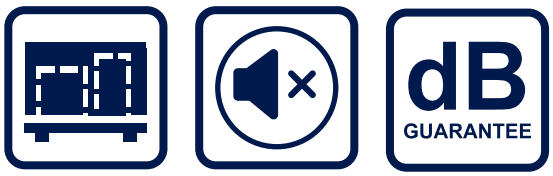
- Weatherproof Enclosure manufactured using heavy duty steel insuring the engine & alternator is protected from corrosion and aggressive site condition.
- Internal soundproofing is washable & is a fire resistance material.
- Rubber buffers for forklift entry protection.



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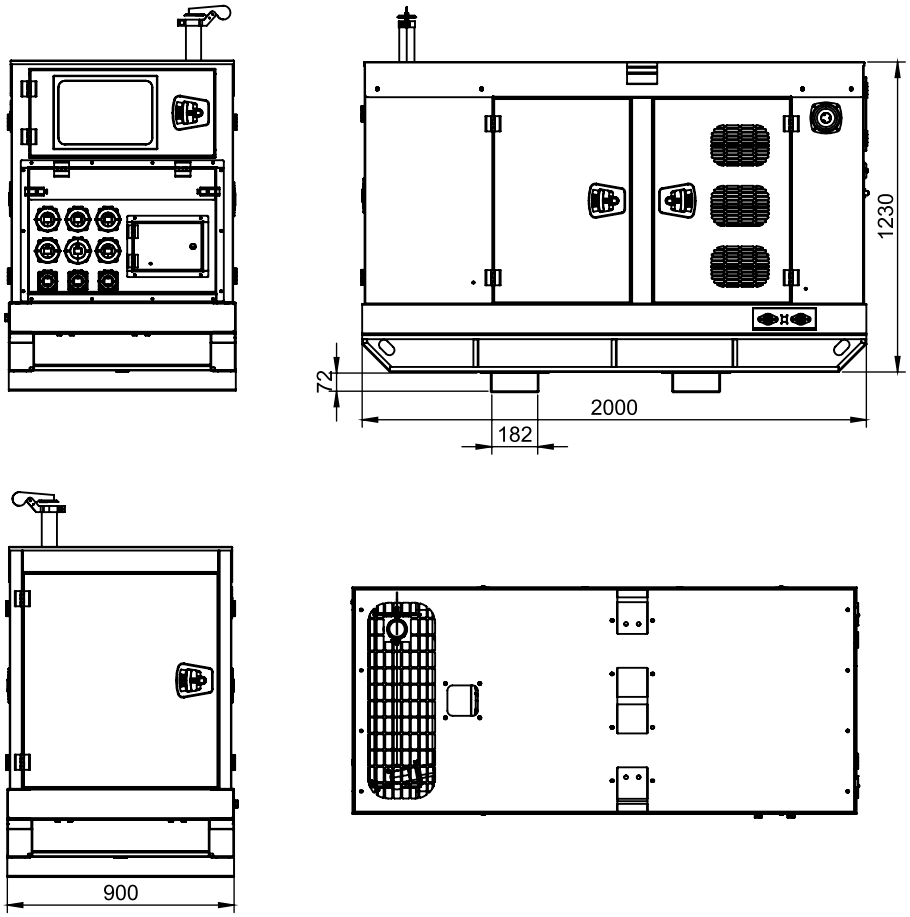
Noise Level 50Hz

Guaranteed Noise Level	89LWA (FFC)
Noise Pressure Level @ 4 m	69dB(A) (FFC)
Noise Pressure Level @ 7 m	64dB(A) (FFC)



Dimensional Data Canopy Version

Length	2000mm
Width	900mm
Height	1230mm
Weight (Dry)	903kg
Weight (Wet)	996kg



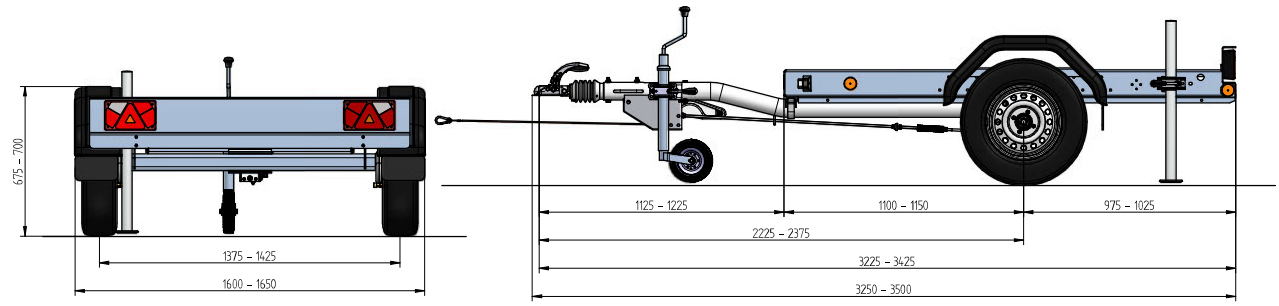
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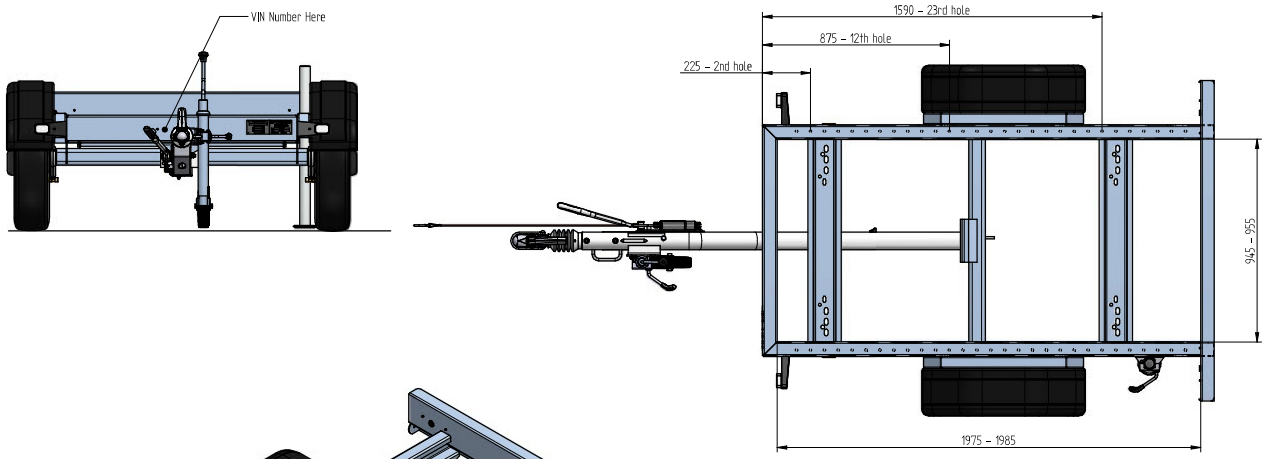
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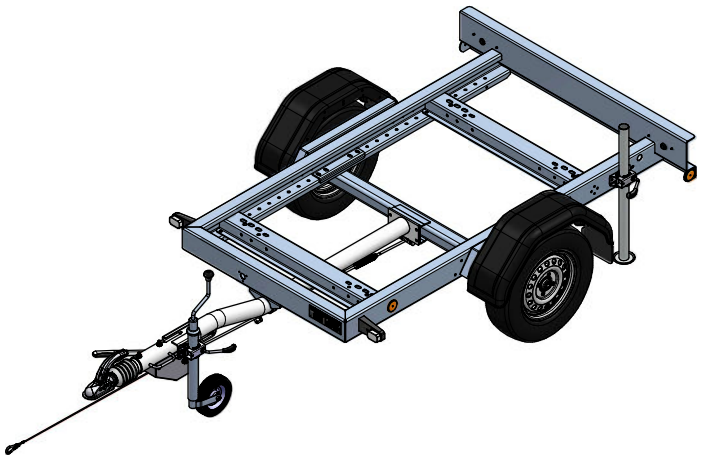
POWER GENERATION

Trailer Details

Model Name	KNOTT-530312
Length	3250-3500mm
Width	1600-1650mm
Height	675-700mm
Trailer Weight	235-265kg
Max. Load Capacity	1300kg
Frame Material	Galvanized



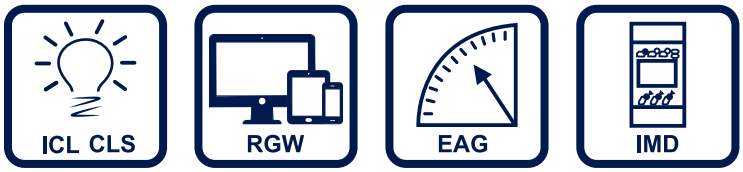




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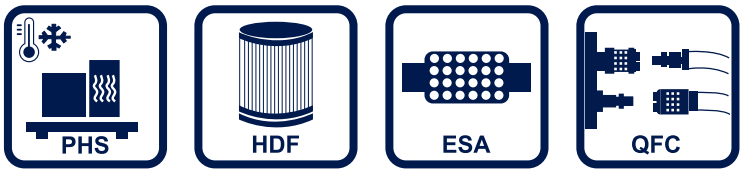
Electrical Optional Extras

Internal Canopy Lighting System with Manual Switch	ICL
Control Section Internal Lighting (automatic with door switch)	CLS
DSE890 MKII DSEWebNet ® Gateway 4G (GSM/Ethernet)	RGW2
DSE2157 Output (8) Expansion Module	ARM7
DSE855 USB to Ethernet Communications Device	RGW9
Insulation Monitoring Device (Replace standard differential protection)	IMD



Mechanical Optional Extras

Pre-heating System	PHS
Air Inlet Preheater	APH
Heavy-Duty Air Filter	HDF
Exhaust Spark Arestor ATEX certified	ESA
Air Shut-Off Valve	ASV



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