

# BLUE STAR

## Power Systems Inc.

### Diesel Product Line

208-600 Volt

MD1600-01

60 Hz / 1800 RPM

1600 kWe / 1450 kWe

Standby / Prime

### Ratings

	208V	240V	480V	600V
<b>Phase</b>	3	3	3	3
<b>PF</b>	0.8	0.8	0.8	0.8
<b>Hz</b>	60	60	60	60
<b>Generator Model</b>	Consult Factory	Consult Factory	743RSL4052	743RSS4290
<b>Connection</b>	4 LEAD WYE	4 LEAD DELTA	4 LEAD WYE	4 LEAD WYE
<b>Standby</b>				
<b>kWe</b>	1600	1600	1600	1600
<b>AMPS</b>	5558	4817	2408	1927
<b>Temp Rise</b>	Consult Factory	Consult Factory	130°C / 27°C	130°C / 27°C
<b>Prime</b>				
<b>kWe</b>	1450	1450	1450	1450
<b>AMPS</b>	5037	4365	2183	1746
<b>Temp Rise</b>	Consult Factory	Consult Factory	105°C / 40°C	105°C / 40°C

### Standard Equipment

- |   |  |   |
|---|--|---|
| <p><b>Engine</b></p> <ul style="list-style-type: none"> <li>▶ Radiator Cooled Unit Mounted (50°C)</li> <li>▶ Blower Fan &amp; Fan Drive</li> <li>▶ Starter &amp; Alternator</li> <li>▶ Oil Pump &amp; Filter</li> <li>▶ Oil Drain Extension w/Valve</li> <li>▶ Governor - Electronic Isochronous</li> <li>▶ 24V Battery System &amp; Cables</li> <li>▶ Air Cleaner (Dry Single Stage)</li> <li>▶ Flexible Fuel Connector</li> <li>▶ EPA Certified Tier 2</li> </ul> <p><b>Listing Certifications</b></p> <ul style="list-style-type: none"> <li>▶ UL 2200 Listed</li> <li>▶ cUL Listed</li> <li>▶ CSA Certified</li> <li>▶ Seismic Certified to IBC 2012</li> </ul> | <p><b>Generator</b></p> <ul style="list-style-type: none"> <li>▶ Brushless Single Bearing</li> <li>▶ Automatic Voltage Regulator</li> <li>▶ ± .25% Voltage Regulation</li> <li>▶ 4 Pole, Rotating Field</li> <li>▶ 130°C Standby Temperature Rise</li> <li>▶ 105°C Prime Temperature Rise</li> <li>▶ 100% of Rated Load - One Step</li> <li>▶ 5% Maximum Harmonic Content</li> <li>▶ NEMA MG 1, IEEE and ANSI Standards Compliance for Temperature Rise</li> </ul> | <p><b>Additional</b></p> <ul style="list-style-type: none"> <li>▶ Microprocessor Based Digital Control</li> <li>▶ Interface Connection Box</li> <li>▶ Control Panel Mounted in NEMA 12 Enclosure</li> <li>▶ Base - Structural Steel</li> <li>▶ Main Line Circuit Breaker Mounted &amp; Wired</li> <li>▶ Critical Grade Silencer Loose</li> <li>▶ Catalyst / Silencer Mounted (Prime)</li> <li>▶ Battery Charger 24V 5 Amp</li> <li>▶ Jacket Water 2 Qty: 9000W 240V w/Isolation Valves</li> <li>▶ Vibration Isolation Mounts (Pad Type)</li> <li>▶ Radiator Duct Flange (OPU Only)</li> <li>▶ Single Source Supplier</li> <li>▶ 2YR / 2000HR Standby Warranty</li> <li>▶ 1YR / 1500HR Prime Warranty</li> <li>▶ Standard Colors - White / Tan / Gray</li> </ul> |
|---|--|---|

## Application Data

Engine			
Manufacturer:	Mitsubishi	Displacement - Cu. In. (lit):	3,989 (65.4)
Model:	S16R-Y2PTAW-1	Bore - in. (cm) x Stroke - in. (cm):	6.69 (17.0) x 7.09 (18.0)
Type:	4-Cycle	Compression Ratio:	14.5:1
Aspiration:	Turbo Charged, H <sub>2</sub> O/Air Intercooled	Rated RPM:	1800
Cylinder Arrangement:	16 Cylinder Vee	Max HP Stby (kWm):	2,346 (1,750)

Exhaust System	Standby	Prime
Gas Temp. (Stack): °F (°C)	940 (504)	890 (477)
Gas Volume at Stack Temp: CFM (m <sup>3</sup> /min)	15,642 (443)	14,089 (399)
Maximum Allowable Exhaust Restriction: in. H <sub>2</sub> O (kPa)	23.6 (5.9)	23.6 (5.9)
Cooling System		
Ambient Capacity of Radiator: °F (°C)	122 (50.0)	122 (50.0)
Maximum Allowable Static Pressure on Rad. Exhaust: in. H <sub>2</sub> O (kPa)	0.50 (0.12)	0.50 (0.12)
Water Pump Flow Rate: GPM (lit/min)	489 (1,851)	489 (1,851)
Heat Rejection to Coolant: BTUM (kW)	36,167 (633)	32,563 (570)
Heat Rejection to Intercooler: BTUM (kW)	36,167 (633)	32,563 (570)
Heat Radiated to Ambient: BTUM (kW)	8,652 (151)	7,841 (137)
Air Requirements		
Aspirating: CFM (m <sup>3</sup> /min)	5,932 (168)	5,5332 (151)
Air Flow Required for Rad. Cooled Unit: CFM (m <sup>3</sup> /min)	99,909 (2,827)	99,909 (2,827)
Air Flow Required for Heat Exchanger/Rem. Rad. CFM (m <sup>3</sup> /min)	Consult Factory For Remote Cooled Applications	
Fuel Consumption		
At 100% of Power Rating: gal/hr (lit/hr)	129.2 (487)	115.4 (436)
At 75% of Power Rating: gal/hr (lit/hr)	94.1 (356)	86.8 (325)
At 50% of Power Rating: gal/hr (lit/hr)	64.4 (241)	58.7 (220)
Fluids Capacity		
Total Oil System: gal (lit)	52.8 (200)	52.8 (200)
Engine Jacket Water Capacity w/Intercooler: gal (lit)	44.9 (170)	44.9 (170)
System Coolant Capacity: gal (lit)	97.0 (367)	97.0 (367)

**Deration Factors**

Altitude: Derate 0.5% per 328 ft (100 m) above 3,280 ft (1,000 m) standby and prime. | Temperature: Derate 1.0% per 18°F (10°C) above 104°F (40°C) standby and prime. Consult factory for site conditions above these parameters.

## DGC-2020 Control Panel

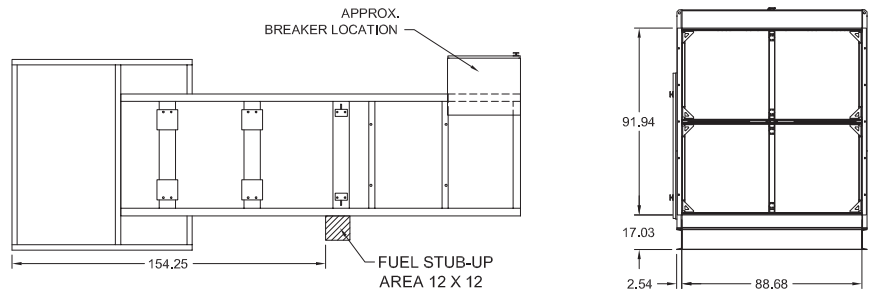
### Standard Features

- ▶ Digital Metering
- ▶ Engine Parameters
- ▶ Generator Protection Functions
- ▶ Engine Protection
- ▶ CAN Bus ECU Communications
- ▶ Windows-Based Software
- ▶ Multilingual Capability
- ▶ Remote Communications to RDP-110 Remote Annunciator
- ▶ 16 Programmable Contact Inputs
- ▶ Up to 15 Contact Outputs (7 standard)
- ▶ UL Recognized, CSA Certified, CE Approved
- ▶ Event Recording
- ▶ IP 54 Front Panel Rating with Integrated Gasket
- ▶ NFPA 110 Compatible

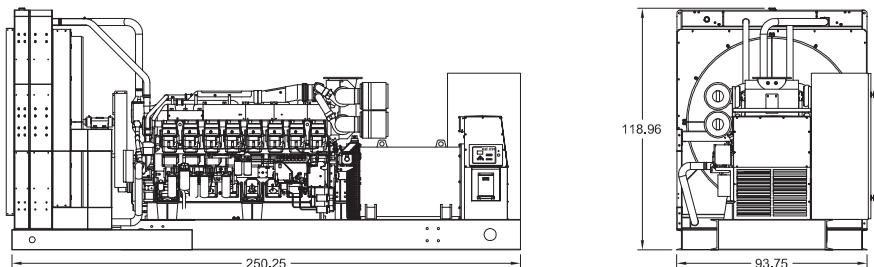


## Weights / Dimensions / Sound Data

	L x W x H	Weight lbs
<b>OPU</b>	250.25 x 93.75 x 119 in	34,700
<b>Level 1</b>	282 x 110 x 145 in	40,000
<b>Level 2</b>	282 x 110 x 145 in	40,200
<b>Level 3</b>	378 x 110 x 145 in	42,850



	No Load	Full Load
<b>OPU</b>	92 dBA	94 dBA
<b>Level 1</b>	85 dBA	87 dBA
<b>Level 2</b>	83 dBA	85 dBA
<b>Level 3</b>	80 dBA	82 dBA



Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice. Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.

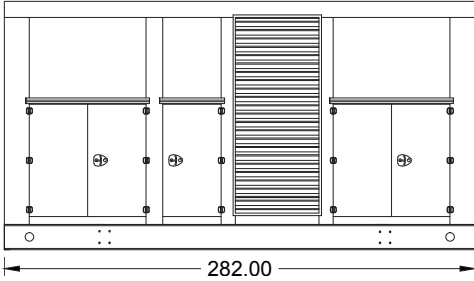
# Diesel Product Line

1600 kWe / 1450 kWe

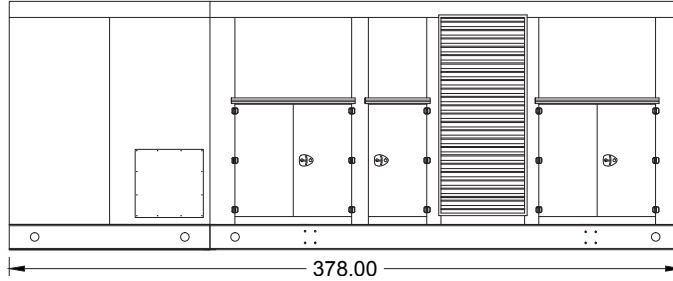


## Enclosures

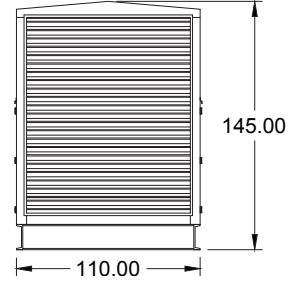
Level 1 & 2 | Side View (Weather Proof)



Level 3 | Side View (Sound Attenuated)



Level 1, 2 & 3 | Intake View



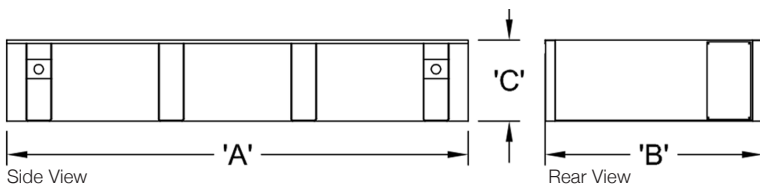
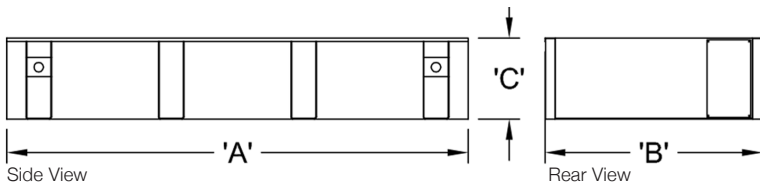
All enclosures are 150 MPH Wind Rated.

Level 2 & 3 enclosures include sound attenuation foam.

Level 3 enclosure includes frontal sound & exhaust hood.

\*Enclosure height does not include exhaust system.

## Double Wall UL 142 Listed Fuel Tanks



	OPU / Level 1 / Level 2		
	12 Hour 1925 Gallon	24 Hour 3850 Gallon	48 Hour 7700 Gallon
<b>A</b>	282.00	312.00	576.00
<b>B</b>	110.00	110.00	110.00
<b>C</b>	22.00	36.00	36.00

	Level 3		
	12 Hour 1925 Gallon	24 Hour 3850 Gallon	48 Hour 7700 Gallon
<b>A</b>	378.00	378.00	576.00
<b>B</b>	110.00	110.00	110.00
<b>C</b>	16.00	28.00	36.00

All specification sheet dimensions are represented in inches.

All enclosures and fuel tanks are based on the standard standby unit configuration. Any deviation can change dimensions.

Materials and specifications subject to change without notice.

American Owned



American Made

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