

# Cargo Equipment Solutions, Inc.

12301 SW 128 Court, Unit 104, Miami, Florida 33186  
 Phone: 305-259.4537 / 305-259.4538 / Fax: 305-259.4539 / U.S. Toll Free: 877-813.0251  
 Email: sales@cargoequipsolutions.com

## ***Diesel Generating Set M860***

MODEL	M860
Standby Power (60Hz)	800KW / 1000KVA
Prime Power (60Hz)	725KW / 906KVA

### Standard Features

#### General Features:

- Engine (MTU 12V2000G85)
- Radiator 40C max, fans are driven by belt, with safety guard
- 24V charge alternator
- Alternator: single bearing alternator IP23, insulation class H/H
- Absorber
- Dry type air filter, fuel filter, oil filter
- Main line circuit breaker
- Permanent Magnet Generator (PMG)
- Standard control panel
- Two 12V batteries, rack and cable
- Ripple flex exhaust pipe, exhaust siphon, flange, muffler.
- User manual.



PHOTO FOR REFERENCE ONLY

### Generator Ratings

Voltage	HZ	Phase	P.F (COS ϕ)	Standby Amps	Standby Ratings (KW/KVA)	Prime Ratings (KW/KVA)
480/277	60	3	0.8	1202	800/1000	725/906
460/266	60	3	0.8	1255	800/1000	725/906
440/254	60	3	0.8	1312	800/1000	725/906
416/240	60	3	0.8	1387	800/1000	725/906

Prime Power (PRP): Prime power is available for an unlimited number of annual hours in variable load application, in accordance with GB/T2820-97 (eqv ISO8528) ; A 10% overload capability is available for a period of 1 hour within a 12-hour period of operation.

Standby Power Rating (ESP): The standby power rating is applicable for supplying emergency power for the duration of a utility power interruption. No overload, utility parallel or negotiated outage operation capability is available at this rating.

### Sales Promises

Cargo Equipment Solutions, Inc provides a full line of brand new and high quality products. Each and every unit is strictly factory tested.

Warranty on equipments are: One (01) year or 1000 Hours of standard working condition, what ever comes first. Service and parts are available from Cargo Equipment Solutions, Inc.

**Specifications may change without notice.**

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## ***Diesel Generating Set M860***

### **ENGINE DATA**

Manufacturer / Model:	MTU / 12V2000G85
Air Intake System:	Turbo, Air/Air Cooling
Fuel System:	Electronic Fuel Injection System
Cylinder Arrangement:	12 in "V"
Displacement:	23.88L
Bore and Stroke:	130*150 (mm)
Compression Ratio:	16.0
Rated RPM:	1800 rpm
Max. Standby Power at Rated RPM:	890KW (without fan)
Governor Type:	ADEC

### **Exhaust System**

Exhaust Gas Flow:	162m3/min
Exhaust Temperature:	565°C
Max Back Pressure:	8.5kPa

### **Air Intake System**

Max Intake Restriction:	5kPa
Burning Capacity:	63m3/min
Intake Flow:	1080m3/min

### **Fuel System**

100%( Prime Power) Load:	178.26 Lts / Hr
75%(Prime Power) Load:	179.12 Lts / Hr
50%(Prime Power) Load:	181.68 Lts / Hr

### **Oil System**

Total Oil Capacity:	77 Lts
Oil Consumption:	0.5% Fuel Consumption
Engine Oil Tank Capacity:	67 Lts
Oil Pressure at Rated RPM:	650 - 780 kPa

### **Cooling System**

Total Coolant Capacity:	164 Lts
Max Water Temperature:	102°C

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### **ALTERNATOR SPECIFICATION**

#### **General Data**

Compliance with GB755, BS5000, VDE0530, NEMAMG1-22, IED34-1, CSA22.2 and AS1359 standards.

#### **Alternator Data**

Number of Phase:	3
Connecting Type:	3 Phase and 4 Wires, $\Delta Y$ type connecting
Number of Bearing:	1
Power Factor:	0.8
Protection Grade:	IP23
Altitude:	$\leq 1000\text{m}$
Exciter Type:	Brushless, self-exciting
Insulation Class, Temperature Rise:	H/H
Telephone Influence Factor (TIF):	$< 50$
THF:	$< 2\%$
Voltage Regulation, Steady State:	$\leq \pm 1\%$
Alternator Capacity:	925 KVA
Alternator Efficiencies:	94.50%
Air Cooling Flow:	1.961 m <sup>3</sup> /s

### **GENERATING SET DATA**

Voltage Regulation:	$\geq \pm 5\%$
Voltage Regulation, Stead State:	$\leq \pm 1\%$
Sudden Voltage Warp (100% Sudden Reduce):	$\leq +20\%$
Sudden Voltage Warp (Sudden Increase):	$\leq -15\%$
Voltage Stable Time (100% Sudden Reduce):	$\leq 4\text{S}$
Voltage Stable Time (Sudden Increase):	$\leq 4\text{S}$
Frequency Regulation, Stead State:	0-5% adjustable
Frequency Waving:	$\leq 0.5\%$
Sudden Frequency Warp (100% Sudden Reduce):	$\leq +10\%$
Sudden Frequency Warp (Sudden Increase):	$\leq -7\%$
Frequency Recovery Time (100% Sudden Reduce):	$\leq 3\text{S}$
Frequency Recovery Time (Sudden Increase):	$\leq 3\text{S}$
Noise Level:	116 dB
Emission Level:	EPA Tier 2

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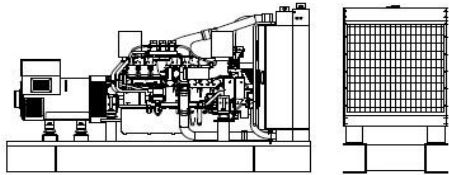
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## Diesel Generating Set M860

### Options

Engine	Fuel System	Control System
<ul style="list-style-type: none"> <li><input type="checkbox"/> Oil Drain Valve</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Daily Fuel Tank</li> <li><input type="checkbox"/> Base Fuel Tank</li> <li><input type="checkbox"/> Water Separator</li> <li><input type="checkbox"/> Fuel Level Sensor</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Remote Control Panel</li> <li><input type="checkbox"/> Auto Transfer Switch (ATS)</li> <li><input type="checkbox"/> Paralleling System</li> <li><input type="checkbox"/> Electricity Output Cabinet</li> </ul>
Alternator	Others	Data
<ul style="list-style-type: none"> <li><input type="checkbox"/> Anti Condensation Heater</li> <li><input type="checkbox"/> Drop CT (For Paralleling)</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Rainproof Type</li> <li><input type="checkbox"/> Soundproof Type</li> <li><input type="checkbox"/> Container Type</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Spare Parts</li> </ul>

### Dimensions & Weight

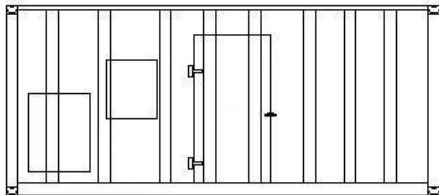


#### Standard Configuration (Open Type)

Overall Size: 4500 (mm) \*2100 (mm) \*2070 (mm)  
 Weight: 6950 kg

#### With Base Fuel Tank

Overall Size: 4500 (mm) \*2100 (mm) \*2080 (mm)  
 Weight: 7000 kg



#### Soundproof Type

Overall Size: 20' FT. Container  
 6058 (mm) \*2438 (mm) \*2591 (mm)  
 Weight: 11,000 kg

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## ***Diesel Generating Set M860***

### **Auto Module Control Panel**



Auto Module Control Panel is the configuration for nobody on duty controlling generators. This kind of panel adopts auto module control system, with large LCD display to show the menu.

Features: MRS10-can receive remote output signal from ATS and realize auto start and stop of generators.

MRS16-can realize all functions of MRS10, add RS232 interface which can communicate with PC to realize remote operation.

AMF25-Auto Mains Failure controller, can realize all functions of MRS16, furthermore can detect ATS and control directly.

### **Auto Parallel Control Panel**



Automatic Parallel Control Panel, This new automatic parallel system adopts intelligent modules, inserted and folded installed, no need the peripheral relay and logic circuit. The main switch adopts electronic breaker or frame breaker, combined together with the generator, which is very reliable. One generator, one panel. The panel can be used both for singly and parallel. It is only need to parallel generator with such panel when the capability needs to be enlarged in the future.

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