

# G3406 TA

## Gas Petroleum Engine 170 kW Generator Unit

### FEATURES

#### **Murphy EICS**

The Engine Integrated Control System (EICS) combines engine key components to optimize the engine performance while maintaining emission compliance. The pre-calibrated package combines ignition system, air-fuel ratio control, speed governing, interface and diagnostics, sensors, harnesses, catalyst and engine control unit (ECU) to achieve the highest performance. The system ensures an automatic operation avoiding manual field adjustments. In addition, EICS allows for a wider spectrum of natural gas qualities to work with the engine by automatically adjusting and keeping performance and compliance.

#### **Dynamic Propane System (Optional)**

The dynamic propane system allows the engine to run on propane as a secondary fuel source. The system allows for a seamless transition between the two fuels even at loaded conditions. It reduces downtime by allowing the engine to start with propane and also automatically switch fuels in the case of shortage of natural gas pressure.

#### **Gas Train**

The uniquely designed gas train is equipped with a rugged gas coalescing filter that not only filters dry particulates but catches incoming liquids. Two pressure regulators protect the engine while maintaining a constant and stable flow and pressure. Two pressure relief valves for added safety. A liquid level switch that will shutdown the unit in the case of high accumulation of liquids in the coalescing filter. An automatic drain valve that allows for a constant yet controlled drain of liquids in the coalescer.

#### **Oil Supply Tank**

The auxiliary engine oil tank supplies the main engine oil tank increasing its capacity and prolonging oil life. The gravity feed system includes an oil level switch that monitors quantity and shuts the engine down in the case of low oil level.



#### **Electrical Distribution**

Three phase lug distribution with load bank capability. Weather proof panel fitted with door shunt trip safety sensor.

#### **Structural Skid**

Engineered with substantial structural integrity while keeping low height and weight. Designed to be portable and to fit standard trailer sizes. Fitted with forklift pockets and tow bars for added convenience.

#### **Cat® Product Link™ (Optional)**

Product link gets you accurate, timely and useful information about the location of your unit via cell or satellite.

#### **M2M Remote Monitoring (Optional)**

M2M offer a cloud-based service that allows remote monitoring of various parameters of the unit. The system will instantly alert in case of a malfunction or out-of-parameter scenario.

### SPECIFICATIONS

#### ENGINE

|                   |                |                      |                                 |                     |                   |
|-------------------|----------------|----------------------|---------------------------------|---------------------|-------------------|
| Brake Horse Power | <b>276 bhp</b> | Compression Ratio    | <b>9.4 :1</b>                   | Specific Output     | <b>18.9 bhp/L</b> |
| Stroke            | <b>6.5 in</b>  | Number of Cylinders  | <b>6</b>                        | Weight (Dry)        | <b>3000 lb</b>    |
| Bore              | <b>5.4 in</b>  | Cylinder Arrangement | <b>In-Line</b>                  | Engine Speed        | <b>1,800 rpm</b>  |
| Displacement      | <b>14.59 L</b> | Aspiration           | <b>Turbocharged-Aftercooled</b> | Oil Change Interval | <b>750 hr</b>     |

#### GENERATOR

|       |             |         |               |                    |                  |
|-------|-------------|---------|---------------|--------------------|------------------|
| Make  | <b>Cat</b>  | Power   | <b>170 kW</b> | Voltage Regulation | <b>&lt; 1/2%</b> |
| Model | <b>SR4B</b> | Voltage | <b>480 V</b>  | Frequency          | <b>60 Hz</b>     |

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170 kW Generator Unit

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## ELECTRICAL DISTRIBUTION

### CIRCUIT BREAKER

|         |               |
|---------|---------------|
| Voltage | 600VAC/250VDC |
| Poles   | 3             |
| Amps    | 400 A         |

### DISTRIBUTION

|             |         |
|-------------|---------|
| Load Shed   | Capable |
| Paralleling | n/a     |
| Location    | Rear    |

## FUEL CONSUMPTION

### NATURAL GAS (905 LHV)

|           |           |
|-----------|-----------|
| 100% Load | 2262 SCFH |
| 75% Load  | 1851 SCFH |
| 50% Load  | 1444 SCFH |

### PROPANE (WITH PROPANE START OPTION)

|           |              |
|-----------|--------------|
| 100% Load | 24.1 gal/hr  |
| 75% Load  | 19.72 gal/hr |
| 50% Load  | 15.39 gal/hr |

## EXHAUST DATA

|                        |         |
|------------------------|---------|
| Pipe Diameter          | 5.0 in  |
| Exit Direction         | Forward |
| Max Temp. (Engine OUT) | 1007° F |
| Exhaust Outlet Height  | 148 in* |

### EMISSIONS (CATALYST OUT)

|     |              |
|-----|--------------|
| NO2 | 0.5 g/bhp-hr |
| CO  | 2.0 g/bhp-hr |
| THC | 1.5 g/bhp-hr |

## FUEL TRAIN PRESSURE SETTINGS

### INLET SIZE

|             |            |
|-------------|------------|
| Natural Gas | 2 in NPT   |
| Propane     | 3/8 in NPT |

### OPTIMAL NATURAL GAS INLET PRESSURE

|         |         |
|---------|---------|
| Minimum | 75 psi  |
| Maximum | 300 psi |

### PRESSURE RELIEF VALVES

|        |         |
|--------|---------|
| PRV #1 | 200 psi |
| PRV #2 | 50 psi  |

## ELECTRONICS

|                     |                   |
|---------------------|-------------------|
| Ignition System     | Murphy EICS       |
| Governor Type       | Woodward Flo-Tech |
| Controller          | EMCP II+          |
| Battery Voltage     | 24V               |
| Number of Batteries | 2                 |

## DIMENSIONS

|        |         |
|--------|---------|
| Length | 240 in* |
| Height | 156 in* |
| Width  | 96 in*  |

Technical information contained in this document is subject to change without notice.  
Data may vary from unit to unit. Unit photo may not depict actual configuration.  
\*Trailer dimensions included.

## LOW LOAD TIME FOR CONTINUOUS APPLICATION

| Engine Load | G3300, 3400, 3500 |         | G3600   |
|-------------|-------------------|---------|---------|
|             | NA                | TA      | TA      |
| Low Idle    | 1 hr              | 1 hr    | 1 hr    |
| 20%         | 8 hr              | 24 hr   | 24 hr   |
| 40%         | 24 hr             | 750 hr  | 750 hr  |
| 60%         | 100 hr            | 750+ hr | 750+ hr |
| 80%         | 750+ hr           | 750+ hr | 750+ hr |
| 100%        | 750+ hr           | 750+ hr | 750+ hr |

NOTE: CG-137 falls under the G3400 TA model family.

FOR MORE INFORMATION:

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**WARREN**

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