

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 C412

| MODEL | C412 |
|----------------------|----------------|
| Standby Power (60Hz) | 400KW / 500KVA |
| Prime Power (60Hz) | 350KW / 437KVA |

Standard Features

General Features:

- Engine (CCEC Cummins KTA19-G2)
- 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
- Standard control panel
- Two 12V batteries, rack and cable
- Ripple flex exhaust pipe, exhaust siphon, flange, muffler.
- User manual

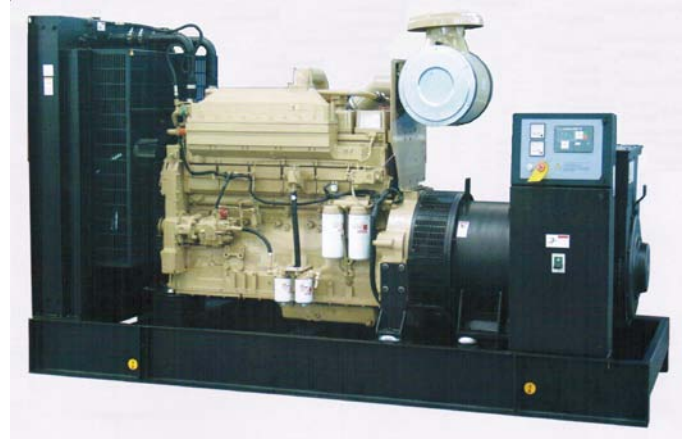


PHOTO FOR REFERENCE ONLY

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 | 601 | 400/500 | 350/437 |
| 460/266 | 60 | 3 | 0.8 | 627 | 400/500 | 350/437 |
| 440/254 | 60 | 3 | 0.8 | 656 | 400/500 | 350/437 |
| 416/240 | 60 | 3 | 0.8 | 694 | 400/500 | 350/437 |

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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ENGINE DATA

| | |
|----------------------------------|-------------------------|
| Manufacturer / Model: | CCEC Cummins KTA19-G2 |
| Air Intake System: | Turbo, Air /Air Cooling |
| Fuel System: | PT type fuel pump |
| Cylinder Arrangement: | 6 in line |
| Displacement: | 18.9L |
| Bore and Stroke: | 159*159 (mm) |
| Compression Ratio: | 14.5 : 1 |
| Rated RPM: | 1800rpm |
| Max. Standby Power at Rated RPM: | 448KW/609Hp |
| Governor Type: | Electronic |

Exhaust System

| | |
|----------------------|---------|
| Exhaust Gas Flow: | 1699L/S |
| Exhaust Temperature: | 513°C |
| Max Back Pressure: | 10kPa |

Air Intake System

| | |
|-------------------------|---------|
| Max Intake Restriction: | 6.23kPa |
| Burning Capacity: | 623L/S |
| Air Flow: | 9808L/S |

Fuel System

| | |
|--------------------------|----------------|
| 100%(Prime Power) Load: | 57.29 Lts / Hr |
| 75%(Prime Power) Load: | 90.18 Lts / Hr |
| 50%(Prime Power) Load: | 98.41 Lts / Hr |

Oil System

| | |
|----------------------------|------------|
| Total Oil Capacity: | 50L |
| Oil Consumption: | 0.24L/h |
| Engine Oil Tank Capacity: | 38L |
| Oil Pressure at Rated RPM: | 345-483kPa |

Cooling System

| | |
|-------------------------|---------|
| Total Coolant Capacity: | 106L |
| Thermostat: | 82-93°C |
| Max Water Temperature: | 104°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, jYj type connecting |
| Number of Bearing: | 1 |
| Power Factor: | 0.8 |
| Protection Grade: | IP23 |
| Altitude: | ≤1000m |
| Exciter Type: | Brushless, self-exciting |
| Insulation Class, Temperature Rise: | H/H |
| Telephone Influence Factor (TIF): | < 50 |
| THF: | < 2% |
| Voltage Regulation, Steady State: | ±1% |
| Alternator Capacity: | 480KVA |
| Alternator Efficiencies: | 93.40% |
| Air Cooling Flow: | 0.99m ³ /s |

GENERATING SET DATA

| | |
|---|-------|
| Voltage Regulation: | ±5% |
| Voltage Regulation, Stead State: | ±1% |
| Sudden Voltage Warp (100% Sudden Reduce): | ±25% |
| Sudden Voltage Warp (Sudden Increase): | ±20% |
| Voltage Stable Time (100% Sudden Reduce): | ≤6S |
| Voltage Stable Time (Sudden Increase): | ≤6S |
| Frequency Regulation, Stead State: | ±5% |
| Frequency Waving: | ≤0.5% |
| Sudden Frequency Warp (100% Sudden Reduce): | ±12% |
| Sudden Frequency Warp (Sudden Increase): | ±10% |
| Frequency Recovery Time (100% Sudden Reduce): | ≤5S |
| Frequency Recovery Time (Sudden Increase): | ≤5S |

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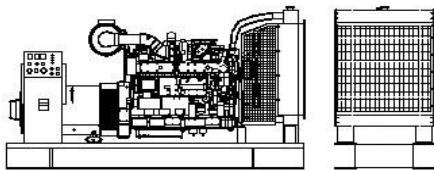
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Options

| Engine | Fuel System | Control System |
|---|---|--|
| <ul style="list-style-type: none"> <input type="checkbox"/> Heater 2KW & 4KW <input type="checkbox"/> Battery Charger 3.5A & 7A | <ul style="list-style-type: none"> <input type="checkbox"/> Daily Fuel Tank <input type="checkbox"/> Base Fuel Tank <input type="checkbox"/> Water Separator <input type="checkbox"/> Fuel Level Sensor | <ul style="list-style-type: none"> <input type="checkbox"/> Auto Control Panel <input type="checkbox"/> Remote Control Panel <input type="checkbox"/> Auto Transfer Switch (ATS) <input type="checkbox"/> Paralleling System |
| Alternator | Others | Data |
| <ul style="list-style-type: none"> <input type="checkbox"/> Anti Condensation Heater <input type="checkbox"/> Permanent Magnet Gen. <input type="checkbox"/> Drop CT (For Paralleling) | <ul style="list-style-type: none"> <input type="checkbox"/> Rainproof Type <input type="checkbox"/> Soundproof Type <input type="checkbox"/> Trailer Type | <ul style="list-style-type: none"> <input type="checkbox"/> Engine Parts Drawing List <input type="checkbox"/> Spare Parts |

Dimensions & Weight

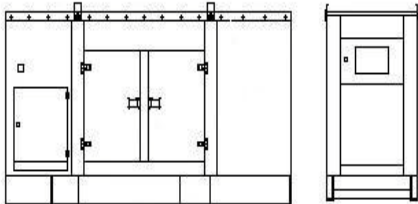


Standard Configuration (Open Type)

Overall Size: 3400 (mm) *1258 (mm) *2000 (mm)
 Weight: 4000kg

With Base Fuel Tank

Overall Size: 3400 (mm) *1258 (mm) *2050 (mm)
 Weight: 4100kg



Soundproof Type

Overall Size: 4630 (mm) *1640 (mm) *2300 (mm)
 Weight: 5500kg

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Standard Control Panel



Cargo Equipment Solutions, Inc. Standard Control Panel is the basic configuration for normal operation and usage, it is of some advantages such as easy to operate, various function and well protection. Operative buttons such as Turn On, Pre-heat, Starting, Stop (Emergency Stop) on the panel. While malfunction occurs, control panel will stop the generator and also alarm with light or buzz.

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.

Specifications may change without notice.