**MODEL APD43C**

**Power Pf. 0.8**
- **Standby**
  - kVA: 43
  - kW: 34.4
- **Prime**
  - kVA: 39
  - kW: 31.2

**Prime**:
- Continuous running at variable load for unlimited periods with 10% overload available for 1 hour in any 12 hour period. In accordance with ISO 8528, ISO 3046.

**Standby**:
- Continuous running at variable load for duration of an emergency. No overload is permitted on these ratings. In accordance with ISO 3046.

- High quality, reliable and complete power unit
- Compact design
- Easy start and maintenance possibility
- Every generating set is subject to a comprehensive test program which includes full load testing, checking and provision of all control and safety shut down functions testing
- Fully engineered with a wide range of options and accessories: Canopy, sound proof canopy and on-road trailer

**POWERED by CUMMINS**

**43 kVA / 34.4 kW**

Manufacturer reserves the right to make changes in model, technical specifications, color, equipment and accessories without prior notice.

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## ENGINE

<table>
<thead>
<tr>
<th>CUMMINS</th>
<th>4BT3.9G2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model</strong></td>
<td><strong>Engine Power Output at rated rpm</strong></td>
</tr>
<tr>
<td></td>
<td>kWm</td>
</tr>
<tr>
<td></td>
<td>40</td>
</tr>
<tr>
<td><strong>Aspiration and Cooling</strong></td>
<td><strong>Total Displacement</strong></td>
</tr>
<tr>
<td></td>
<td>Litre</td>
</tr>
<tr>
<td><strong>No. of Cylinders and Build</strong></td>
<td><strong>Engine Speed</strong></td>
</tr>
<tr>
<td></td>
<td>rpm</td>
</tr>
<tr>
<td><strong>Bore and Stroke</strong></td>
<td><strong>Compression Ratio</strong></td>
</tr>
<tr>
<td></td>
<td>mmxmm</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Governor</strong></td>
<td><strong>Fuel Consumption at full load</strong></td>
</tr>
<tr>
<td></td>
<td>L/hr</td>
</tr>
<tr>
<td><strong>Fuel Tank Capacity</strong></td>
<td><strong>Oil Capacity</strong></td>
</tr>
<tr>
<td></td>
<td>Litre</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Coolant Capacity</strong></td>
<td><strong>Radiator Cooling Air</strong></td>
</tr>
<tr>
<td></td>
<td>Litre</td>
</tr>
<tr>
<td></td>
<td>m³/min</td>
</tr>
<tr>
<td><strong>Air Intake – Engine</strong></td>
<td><strong>Exhaust Gas Flow</strong></td>
</tr>
<tr>
<td></td>
<td>m³/min</td>
</tr>
<tr>
<td></td>
<td>m³/min</td>
</tr>
</tbody>
</table>

- Heavy duty Cummins diesel engine
- Four stroke, water cooled, turbocharged
- Direct injection fuel system
- Electronic Governor system
- 12/24 V D.C. starter and charge alternator
- Replaceable fuel filter, oil filter and dry element air filter
- Cooling radiator and fan
- Starter battery (with lead acid) including Rack and Cables
- Flexible fuel connection hoses and manual oil sump drain valve
- Industrial capacity exhaust silencer and steel bellows
- Jacket water heater(at automatic models)
- Operation manuals and circuit diagram documents

## ALTERNATOR

| **Design** | Brushless single bearing, revolving field |
| **Stator** | Single bearing, flexible disc |
| **Rotor** | 2/3 pitch |
| **Insulation System** | Class H |
| **Standard Temperature Rise** | 125 - 163°C Continuous |
| **Exciter Type** | Self Excited |
| **Phase Rotation** | A (U), B (V), C (W) |
| **Alternator Cooling** | Direct drive centrifugal blower fan |
| **AC Waveform Total Harmonic Distortion** | No load < 1.5%. Non distorting balanced linear load < 5% |
| **Telephone Influence Factor (TIF)** | <50 per NEMA MG1-22.43 |
| **Telephone Harmonic Factor (THF)** | <2% |

- Brushless, single bearing system, flexible disc, 4 poles
- Insulation class H
- Standard degree of protection IP21 ("IP22/IP23 is available.")
- Self-exciting and self-regulating
- Impregnation with tropicalised epoxy varnish
- Solid state Automatic Voltage Regulator
- Stator winding with 2/3 pitch for improved harmonics

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CONTROL SYSTEM

Control supervision and protection panel is mounted on the genset base frame. The control panel is equipped as follows:

1. Auto Mains Failure Control Panel
   - Panel equipments:
     - Control with AMF module
     - Static battery charger
     - Emergency stop push button
   - a) Generating set control module DSE6120 features:
     - The module is used to monitor main supply and starts and stops of a standby generating set
     - Micro-processor based design
     - Automatic control of main and generator contactors
     - Monitors engine performance and AC power output LED alarm indication
     - Front panel configuration of timers and alarm trip points
     - 4 configurable analogue/digital inputs, 8 configurable digital inputs
     - 6 configurable DC outputs
     - Easy push button control
     - STOP/RESET - MANUAL - AUTO - TEST – START
   - b) Metering via LCD display:
     - Generator Volts (L-L / L-N)  Generator kW
     - Engine oil pressure (PSI-Bar)  Generator kW
     - Generator Ampere (L1,L2,L3)  Generator Cos (σ)
     - Engine temperature (° C&° F)
     - Generator Frequency (Hz)
     - Plant battery volts
     - Engine hours run
     - Mains Volts (Ph-Ph/Ph-N)
   - c) Alarms:
     - Over and Under Speed
     - Low and High Battery Volt.
     - Start and Stop Failure
     - Charge Fail
     - Over Current
     - Under / Over Generator Voltage
     - Low Oil Pressure
     - Emergency stop
     - High engine temperature
   - d) LED indications
     - Mains available
     - Generator available
     - Mains on load
     - Generator on load

2. Power Outlet Terminal Board Mounted on the Gen-set Base Frame

OPTIONAL EQUIPMENTS

**Diesel Engine**
- Oil heater
- 3/4 Pole Output Circuit Breaker
- Anti-condensation Heater

**Panel**
- Charge ammeter
- Transfer Switch 3Pole
- Transfer Switch 4 Pole
- Earth Fault ,single set

**Accessories**
- Bulk fuel tank
- Automatic filling system
- Fuel-water separator filter
- Low fuel level alarm
- Residential silencer
- Enclosure or sound proof canopy
- Trailer
- Manual oil drain pump
- Tool kit for maintenance
CHASSIS

- The complete gen-set is mounted as whole on a heavy-duty fabricated, steel base frame.
- Anti-vibration pads are fixed between the engine/alternator feet and the base frame.
- Base frame design incorporates an integral fuel tank (Up to 750 kVA).
- The generating set can be lifted or carefully pushed/pulled by the base frame.
- Dial type fuel gauge and drain plug on the fuel tank.
- Forklift pockets within base frame (up to 500 kVA).

DIMENSIONS

<table>
<thead>
<tr>
<th>OPEN TYPE</th>
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<tbody>
<tr>
<td>DIMENSIONS (L x W x H)</td>
<td>mm</td>
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<tr>
<td></td>
<td>2070 x 892 x 1411</td>
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<tr>
<td>DRY WEIGHT</td>
<td>kg</td>
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<tr>
<td></td>
<td>830</td>
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</table>

<table>
<thead>
<tr>
<th>SOUND ATTENUATED TYPE</th>
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<tbody>
<tr>
<td>DIMENSIONS (L x W x H)</td>
<td>mm</td>
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<tr>
<td></td>
<td>2282 x 1008 x 1532</td>
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<tr>
<td>DRY WEIGHT</td>
<td>kg</td>
</tr>
<tr>
<td></td>
<td>1030</td>
</tr>
</tbody>
</table>

CANOPY

- All canopy parts are designed with modular principles.
- Without welding assembly.
- Doors on each side.
- All metal canopy parts are painted by electrostatic polyester powder paint.
- Exhaust silencer is protected against environment influences.
- Thermally insulated engine exhaust system.
- Emergency stop push button is installed outside of the canopy.
- Easy lifting and moving.
- Easy maintenance and operation.