MODEL APD35C-6

Power
Pf. 0.8

<table>
<thead>
<tr>
<th></th>
<th>APD35C-6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standby</td>
<td>kW</td>
</tr>
<tr>
<td></td>
<td>kVA 35</td>
</tr>
<tr>
<td></td>
<td>kW 28</td>
</tr>
<tr>
<td>Prime</td>
<td>kW</td>
</tr>
<tr>
<td></td>
<td>kVA 32</td>
</tr>
<tr>
<td></td>
<td>kW 25.6</td>
</tr>
</tbody>
</table>

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

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.

- 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

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

**Brushless, single bearing, revolving field**

**Stator**: Single bearing, flexible disc

**Rotor**: Single bearing, flexible disc

**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

## ENGINE

**Model**: 4B3.9G2

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine Power Output at rated rpm</td>
<td>kWm 33</td>
</tr>
<tr>
<td></td>
<td>HP 44</td>
</tr>
<tr>
<td>Aspiration and Cooling</td>
<td>Natural</td>
</tr>
<tr>
<td>Total Displacement</td>
<td>Litre 3.9</td>
</tr>
<tr>
<td>No. of Cylinders and Build</td>
<td>4- Inline</td>
</tr>
<tr>
<td>Engine Speed</td>
<td>rpm 1800</td>
</tr>
<tr>
<td>Bore and Stroke</td>
<td>mmxmm 102x120</td>
</tr>
<tr>
<td>Compression Ratio</td>
<td>18:1</td>
</tr>
<tr>
<td>Governor</td>
<td>Electronic</td>
</tr>
<tr>
<td>Fuel Consumption at full load</td>
<td>L/hr 8.6</td>
</tr>
<tr>
<td>Fuel Tank Capacity</td>
<td>Litre Open: 154/Canopy: 154</td>
</tr>
<tr>
<td>Oil Capacity</td>
<td>Litre 10.9</td>
</tr>
<tr>
<td>Coolant Capacity</td>
<td>Litre 20</td>
</tr>
<tr>
<td>Radiator Cooling Air</td>
<td>m³/min 120</td>
</tr>
<tr>
<td>Air Intake – Engine</td>
<td>m³/min 2.58</td>
</tr>
<tr>
<td>Exhaust Gas Flow</td>
<td>m³/min 4.914</td>
</tr>
</tbody>
</table>

- Heavy duty Cummins diesel engine
- Four stroke, water cooled, aftercooled
- 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

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stator</td>
<td>2/3 pitch</td>
</tr>
<tr>
<td>Rotor</td>
<td>Single bearing, flexible disc</td>
</tr>
<tr>
<td>Insulation System</td>
<td>Class H</td>
</tr>
<tr>
<td>Standard Temperature Rise</td>
<td>125 - 163°C Continuous</td>
</tr>
<tr>
<td>Exciter Type</td>
<td>Self Excited</td>
</tr>
<tr>
<td>Phase Rotation</td>
<td>A (U), B (V), C (W)</td>
</tr>
<tr>
<td>Alternator Cooling</td>
<td>Direct drive centrifugal blower fan</td>
</tr>
<tr>
<td>AC Waveform Total Harmonic Distortion</td>
<td>No load &lt; 1.5%. Non distorting balanced linear load &lt; 5%</td>
</tr>
<tr>
<td>Telephone Influence Factor (TIF)</td>
<td>&lt;50 per NEMA MG1-22.43</td>
</tr>
<tr>
<td>Telephone Harmonic Factor (THF)</td>
<td>&lt;2%</td>
</tr>
</tbody>
</table>

- 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
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 DSE 6020 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
     ✓ CAN and magnetic pick-up versions (specify on ordering)
     ✓ 4 digital inputs/3 analogue inputs
     ✓ 6 outputs (4 configurable on Magnetic Pick-up, 6 configurable on CANbus version)
     ✓ Easy push button control
     ✓ STOP/RESET - MANUAL - AUTO - TEST – START
   - b) Metering via LED display:
     ✓ Generator Volts (L-L / L-N) Generator kVA
     ✓ 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
- Alternator
  - ✓ 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></th>
<th>OPEN TYPE</th>
<th>SOUND ATTENUATED TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIMENSIONS (LxWxH)</td>
<td>mm</td>
<td>1860<em>900</em>1381</td>
</tr>
<tr>
<td>DRY WEIGHT</td>
<td>kg</td>
<td>750</td>
</tr>
<tr>
<td>DIMENSIONS (LxWxH)</td>
<td>mm</td>
<td>2494<em>963</em>1542</td>
</tr>
<tr>
<td>DRY WEIGHT</td>
<td>kg</td>
<td>1070</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