AP715

715kVA / 572kW
POWERED by PERKINS

**DIESEL GENERATING SET 400/230 V - 50 Hz**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>Standby</th>
<th>Prime</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>kVA</td>
<td>kVA</td>
</tr>
<tr>
<td>Power Pf. 0.8</td>
<td>715</td>
<td>650</td>
</tr>
<tr>
<td></td>
<td>kW</td>
<td>kW</td>
</tr>
<tr>
<td>Standby</td>
<td>572</td>
<td>520</td>
</tr>
<tr>
<td>Prime</td>
<td></td>
<td></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.
## ENGINE

<table>
<thead>
<tr>
<th><strong>PERKINS</strong></th>
<th><strong>2806A-E18TAG2</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Engine Power Output</strong></td>
<td>kWm</td>
</tr>
<tr>
<td>at rated rpm</td>
<td>HP</td>
</tr>
<tr>
<td><strong>Aspiration and Cooling</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Total Displacement</strong></td>
<td>Litre</td>
</tr>
<tr>
<td><strong>No. of Cylinders and Build</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Engine Speed</strong></td>
<td>rpm</td>
</tr>
<tr>
<td><strong>Bore and Stroke</strong></td>
<td>mm x mm</td>
</tr>
<tr>
<td><strong>Compression Ratio</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Governor</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Fuel Consumption at full load</strong></td>
<td>L/hr</td>
</tr>
<tr>
<td><strong>Fuel Tank Capacity</strong></td>
<td>Litre</td>
</tr>
<tr>
<td><strong>Oil Capacity</strong></td>
<td>Litre</td>
</tr>
<tr>
<td><strong>Coolant Capacity</strong></td>
<td>Litre</td>
</tr>
<tr>
<td><strong>Radiator Cooling Air</strong></td>
<td>m³/min</td>
</tr>
<tr>
<td><strong>Air Intake – Engine</strong></td>
<td>m³/min</td>
</tr>
<tr>
<td><strong>Exhaust Gas Flow</strong></td>
<td>m³/min</td>
</tr>
</tbody>
</table>

- Heavy duty Perkins diesel engine
- Four stroke, water cooled, turbocharged and air charge cooled
- 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

<table>
<thead>
<tr>
<th><strong>Design</strong></th>
<th>Brushless single bearing, revolving field</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stator</strong></td>
<td>2/3 pitch</td>
</tr>
<tr>
<td><strong>Rotor</strong></td>
<td>Single bearing, flexible disc</td>
</tr>
<tr>
<td><strong>Insulation System</strong></td>
<td>Class H</td>
</tr>
<tr>
<td><strong>Standard Temperature Rise</strong></td>
<td>105 - 130°C Continuous</td>
</tr>
<tr>
<td><strong>Exciter Type</strong></td>
<td>Self Excited</td>
</tr>
<tr>
<td><strong>Phase Rotation</strong></td>
<td>A (U), B (V), C (W)</td>
</tr>
<tr>
<td><strong>Alternator Cooling</strong></td>
<td>Direct drive centrifugal blower fan</td>
</tr>
<tr>
<td><strong>AC Waveform Total Harmonic Distortion</strong></td>
<td>No load &lt; 1.5%. Non distorting balanced linear load &lt; 5%</td>
</tr>
<tr>
<td><strong>Telephone Influence Factor (TIF)</strong></td>
<td>&lt;50 per NEMA MG1-22.43</td>
</tr>
<tr>
<td><strong>Telephone Harmonic Factor (THF)</strong></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 7320 features:
- The module is used to monitor a mains supply and starts and stops a standby generating set
- Micro-processor based design
- Automatic control of mains and generator contactors
- Monitors engine performance and AC power output
- LED alarm indication
- Front panel configuration of timers and alarm trip points
- Easy push button control
  STOP/RESET - MANUAL –TEST- AUTO – MUTE ALARM – START

b) Metering via LED display:
- Generator Volts (L-L / L-N)
- Engine oil pressure (PSI-Bar)
- Generator Ampere (L1,L2,L3)
- Engine temperature (° C &° F)
- Generator Frequency (Hz)
- Plant battery volts
- Engine hours run
- Mains Volts (Ph-Ph/Ph-N)
- Generator kVA, kWh
- Generator kW as % of rated kW setting
- Generator Cos (σ)

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
- kW overload
- Unbalanced load
- Independent earth fault trip

d) LED indications
Four configurable LED’s like:
- Mains available
- Generator available
- Mains on load
- Generator on load

2. Power Outlet Terminal Board Mounted on the Genset Base Frame

OPTIONAL EQUIPMENTS

Diesel Engine
- Oil heater

Alternator
- 3/4 Pole Output Circuit Breaker
- Anti-condensation Heater

Panel
- Charge ammeter
- Transfer Switch 3 Pole
- 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
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 500kVA)

### DIMENSIONS

#### OPEN TYPE

<table>
<thead>
<tr>
<th>DIMENSIONS (LxWxH)</th>
<th>mm</th>
<th>3450<em>1800</em>2178</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRY WEIGHT</td>
<td>kg</td>
<td>4500</td>
</tr>
</tbody>
</table>

#### SOUND ATTENUATED TYPE

<table>
<thead>
<tr>
<th>DIMENSIONS (LxWxH)</th>
<th>mm</th>
<th>5350x1800x2658</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRY WEIGHT</td>
<td>kg</td>
<td>6260</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