Synchronous Alternators

AN10 Line

New
Synchronous Alternators
AN10 Line

AN10 alternators were developed to be used in generator sets for the Marine and Oil & Gas industries. Designed with mechanical characteristics and specific features for machinery rooms with limited space in oil rigs and vessels, in compliance with the requirements established by the main marine classification societies, such as: ABS, DNV and Lloyd’s.

Technical Data
- Outputs: 1,100 to 3,000 kVA
- Frames: 450 to 560 (IEC)
- Voltages: 440, 690 and 4,160 V
- Number of poles: 4
- Frequency: 60 Hz
- Protection degrees: IP23 to IP55W
- Mountings: IM1001 and IM1101
- Cooling systems: self-ventilated (IC01) and air-water heat exchanger TEWAC (IC81W)

Other features on request.

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Benefits</th>
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<tbody>
<tr>
<td>Special painting plan for harsh environments</td>
<td>Greater resistance and durability of the coatings, protecting components and windings against environments with oil moisture, salt, high humidity and high temperatures</td>
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<tr>
<td>Electrical features for marine</td>
<td>High efficiency, reactances according to application requirements and low harmonic distortion level</td>
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<tr>
<td>Mechanical features for marine</td>
<td>Durability, reliability and mechanical resistance</td>
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<tr>
<td>Compact design</td>
<td>Ideal for applications with severe space restrictions</td>
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<tr>
<td>Flexibility</td>
<td>Projects adapted to various applications and requirements</td>
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<tr>
<td>Optimized for operation</td>
<td>Low maintenance cost and easy access to alternator components</td>
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Local Content

Marine and Oil & Gas industries demand higher local content rate at equipment to be installed in oil rigs and offshore support vessels. Looking in this direction, WEG support the customers to achieve the requested local content rate by supplying products with high level of nationalization. Using a completely national workforce and with the main component parts of these alternators manufactured at WEG, the AN10 line of alternators reaches high levels of local content.

Application

Alternators with optimized performance, specially designed to operate at offshore support vessels and oil rigs. Used in main diesel generator sets, shaft generators, port or standby alternators.
Output per Frame - 60 Hz - 4 Poles

<table>
<thead>
<tr>
<th>Frame</th>
<th>440 V</th>
<th>690 V</th>
<th>4,160 V</th>
</tr>
</thead>
<tbody>
<tr>
<td>450</td>
<td>1,550</td>
<td>1,550</td>
<td>1,550</td>
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<tr>
<td>500</td>
<td>2,125</td>
<td>2,125</td>
<td>2,125</td>
</tr>
<tr>
<td>560</td>
<td>2,700</td>
<td>2,700</td>
<td>2,700</td>
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</tbody>
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**Accessories**

**Standard Accessories**
- Temperature sensor on the stator winding
- Temperature sensor on the bearings
- Hot and cold air temperature sensor (IC81W)
- Temperature sensor at the water inlet and outlet (IC81W)
- Water leakage detector
- Space heater

**Optional Accessories**
- Current transformer for droop
- Current transformer for differential protection
- Potential transformer for voltage regulator feedback
- Field contactor
- Automatic Voltage Regulator (AVR)

**Special Features**
- Height from the shaft center line to the alternator foot (dimension h) according to the customer’s specification
- Footprint according to the customer’s specification

Other accessories on request.
Mounting Features

**Bearings**
- Grease-lubricated rolling bearings (NDE bearing electrically insulated and shaft grounding brush on the DE)
- Expected lifetime L10h of 80,000h

**Terminal Box**
- Mounted on top of the machine with availability for connection on the right, left and top

**Modularity**
- Mechanical flexibility in order to meet the height from the diesel engine shaft to the baseframe
- Possibility of reversing the connection side of the radiator without changing the project

**Cooling**
- Possibility of using single or double tubes radiators, with water inlet temperature according to the customer’s specification

**Coils**
- Form wound coils (rectangular wire) impregnated with the VPI system (Vacuum Pressure Impregnation), able to operate in bad weather, marine environment and with fundamentally switched loads

**Excitation**
- Auxiliary exciter with permanent magnets (PMG) for powering the power circuit of the AVR
Technical Assistance

WEG counts on a network of authorized technical assistance, including at the main marine industry areas in Brazil, fully trained and qualified to provide prompt high quality service. This network structure has the expertise to offer emergency service, provide technical support on the field, including checking’s, commissioning of machines, among other services. Besides this network of authorized technical assistance, WEG counts on an office-based team consisting of technicians and engineers duly qualified and trained to provide remote and prompt field service support. With the application of state-of-the-art equipment, this technical team is available 24 hours, 7 days a week to support our customers so as to minimize the downtime of the operating vessels.

Service

WEG is market leader in motors and generators and also offers services of inspection, restoration and repowering of medium and large electrical machines, performed in the factory or in the field, including other brands, as follows:

- DC generators and motors
- Three-phase induction motors (squirrel cage or slip ring, low, medium and high voltage)
- Synchronous motors (with or without brushes, low, medium and high voltage)
- Turbogenerators
- Hydrogenerators
WEG Original Parts and Pieces

After years in operation, in addition to the periodic checkups described in the maintenance plan, the alternators need restoration in order to keep working properly. For this restoration, we recommend that you use original spare parts supplied by the manufacturer. WEG team is available to promptly assist you in the correct identification of the component parts.