

Industrial Motors
Commercial &
Appliance Motors
Automation
Digital &
Systems
Energy
Transmission &
Distribution
Coatings

Synchronous Alternators

Reliability and
high performance
for your application



Driving efficiency and sustainability





Synchronous Alternators Line

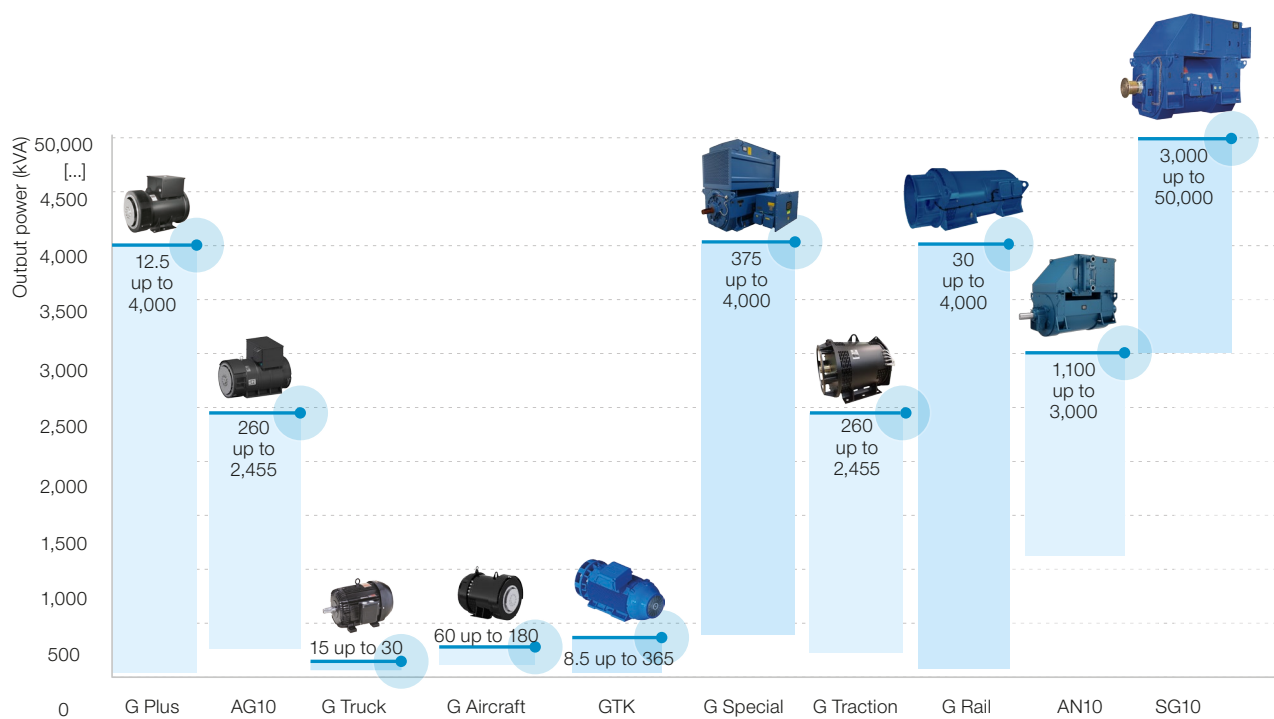
WEG was established in 1961, and is one of the largest manufacturers of alternators in Latin America and of electric motors in the world. With the experience of those who have already produced more than 100,000 MW of power in alternators, WEG offers a wide range of alternators to meet the requirements of different applications in virtually any environment.

The alternators are specially designed according to the specific characteristics of each application so as to meet the customer's needs: generator sets, wind turbines, turbogenerators (steam or gas) and hydrogenerators.

WEG offers the customer after sales technical support in applications and installations by means of its specialized customer service network.

This document presents WEG alternator options and applications in generator sets driven by internal combustion engines (diesel, gas, biodiesel, ethanol, oil, gasoline, bi-fuel, etc.).

The use of a generator set ensures power supply regardless the power grid, which makes WEG alternators an excellent solution for a wide range of continuous, prime and standby power applications.



Lines



G Plus Line

Versatile and high performance alternators for the most demanding applications, resulting in a reliable and safe energy supply.

The G Plus alternators offer excellent cost effectiveness and easy maintenance by means of the latest performance and safety concepts for continuous, prime power and standby operation.

Technical features

- Output power: 12.5 up to 4,000 kVA
- Frame: 160 up to 630 (IEC)
- Voltage: 220 to 690 V
- Frequency: 50 and 60 Hz
- Degree of protection: IP21/IP23
- Insulation class: 180 (H)
- Excitation: brushless
- Number of poles: 4, 6, 8 and 10

Note: check the electrical and mechanical features at www.weg.net, PMG also offered as optional from frame 200.

Applications

Continuous, prime and standby power operation for: industrial, commercial, marine, construction, telecommunications, mining, apartments, irrigation, hospitals, data centers, agriculture, airports, etc.



Features	Benefits
Permanent magnets on the exciter stator	Ensure built-up without requiring external power supply after long stops.
2/3 rd pitch winding configuration	Reduce harmonic distortion by affecting multiple harmonic components. The resulting effect is a cleaner and more stable output voltage.
Auxiliary coil	Provide precise and stable excitation voltage to the alternator's field windings. This can result in improved voltage regulation, ensuring that the alternator maintains a steady and consistent output voltage, even under varying load conditions.
Coil impregnation and protection	Developed with modern technologies, the VPI impregnation is used by WEG as a standard for 100% of stators, ensuring perfect insulation.



AG10 Line

The AG10 line is designed to achieve higher power density through innovations in electromagnetic design, improved ventilation system and including a robust frame in cast iron material.

Technical features

- Output power: 260 to 2,455 kVA
- Frame: 250 up to 400 (IEC)
- Voltage: 220 up to 690 V
- Frequency: 50 and 60 Hz
- Degree of protection: IP21 or IP23
- Insulation class: 180 (H)
- Excitation: brushless
- Number of poles: 4

Note: check the electrical and mechanical features at www.weg.net, PMG also offered as optional from frame 200.

Applications

Continuous, prime and standby power operation for: industrial, commercial, marine, construction, telecommunications, mining, apartments, irrigation, hospitals, data centers, agriculture, airports, etc.



Features	Benefits
Permanent magnets on the exciter stator	Ensure built-up without requiring external power supply after long stops.
Frame	Cast iron frame gives the added advantage of better power density, better heat dissipation and reduced vibration (increasing life of alternator bearings).
Auxiliary coil	Provide precise and stable excitation voltage to the alternator's field windings. This can result in improved voltage regulation, ensuring that the alternator maintains a steady and consistent output voltage, even under varying load conditions.
Coil impregnation and protection	Developed with modern technologies, the VPI impregnation is used by WEG as a standard for 100% of stators, ensuring perfect insulation.



G Truck Line

Manufactured in cast iron frames with degree of protection IP56W, essential for the application, ensuring protection against the weather elements.

Driven by the truck tractor or another mechanical energy source from the truck, it supplies the necessary energy it supplies the necessary power to the gas pump for unloading purposes or other loads of the truck.

Technical features

- Output power: 15 and 30 kVA
- Frame: 160 (IEC)
- Voltage: 230 up to 460 V
- Frequency: 60 and 120 Hz
- Degree of protection: IP56W
- Insulation class: 180 (H)
- Number of poles: 4



Applications

Power supply for the cryogenic gas pump on trucks and semi-trailers for unloading gases.

Features	Benefits
Degree of protection IP56W	Protection against weather exposure and water jet ingress.
Power supply in 12 or 24 V _{DC}	Use the vehicle battery.
Cast iron frame	Better cooling, greater strenght and protection against weather exposure.
Compact	Allow the installation in small spaces.



G Aircraft Line

WEG 400 Hz alternators are especially designed for aviation Ground Power Units (GPU) that are driven by diesel engines to power the aircraft while on ground for boarding and maintenance.

WEG's high efficiency and robust design is optimized to allow for greater savings in fuel and maintenance costs while ensuring long term reliability.

Technical features

- Output power: 60 up to 180 kVA
- Frame: 315 (IEC)
- Low voltage: 200/115 or 208/120 V
- Frequency: 400 Hz
- Degree of protection: IP23
- Insulation class: 180 (H)
- Number of poles: 24 and 26
- Ambient temperature: -15 °C up to 40 °C



Applications

Alternators driven by diesel engine for power supply of aircrafts on ground - GPU (Ground Power Unit).

Features	Benefits
Permanent magnets on the exciter stator	Ensure built-up without requiring external power supply after long stops.
2/3 rd pitch winding configuration	Reduce harmonic distortion by affecting multiple harmonic components. The resulting effect is a cleaner and more stable output voltage.
Auxiliary coil	Provide precise and stable excitation voltage to the alternator's field windings. This can result in improved voltage regulation, ensuring that the alternator maintains a steady and consistent output voltage, even under varying load conditions.
Easy and low maintenance	Given the importance of Ground Power Units critical application, all components have been carefully designed to minimize and facilitate the best available maintenance practices.



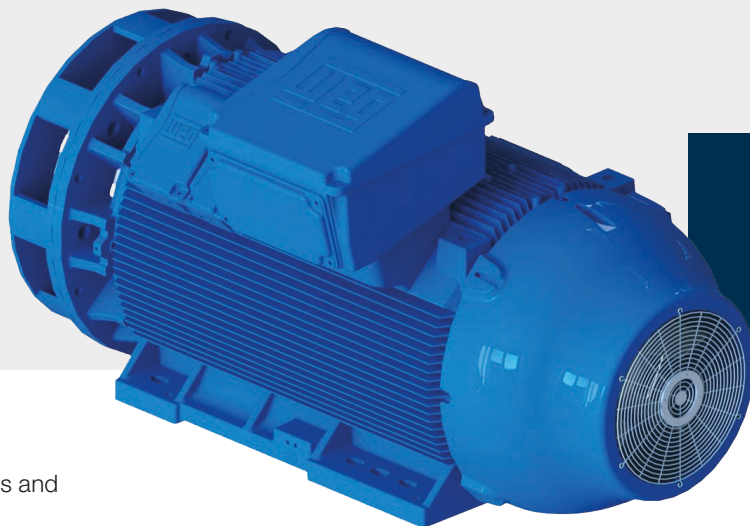
GTK Line

Solution developed for harsh environments, where the product robustness and quality are determining factors for the application.

The cast iron frame provides protection against weather exposure and resistance to corrosion, extending the product life cycle.

Technical features

- Output power: 8.5 to 365 kVA
- Frame: 160 to 355 (IEC)
- Voltage: 220 to 690 V
- Frequency: 50 and 60 Hz
- Degree of protection: IP54W, IP55W and IP56W
- Insulation class: 180 (H)
- Excitation: brushless
- Number of poles: 4
- Model indicated for hazardous area when the application requires
- Ex-Ec



Applications

Metallurgical and mechanical industry, mining, oil & gas and off-road trucks.

Features	Benefits
Degree of protection	Protection against weather exposure and water jet ingress.
Permanent magnets on the exciter stator	Ensure built-up without requiring external power supply after long stops.
Cast frame	Better cooling, greater strength and protection against weather exposure, providing an even longer life cycle.
Compact	Allows the installation in small spaces.



G Special Line

They are alternators that present versatility and reliability for rigorous applications, the G Special alternators are closed and robust equipment, designed to operate in severe environments or with the presence of impurities and dust. In addition, they have a wide range of options and customizations, which make it possible to meet different cooling requirements, constructive forms and levels of protection.

Technical features

- Output power: 375 up to 4,000 kVA
- Frame: 315 to 630 (IEC)
- Voltage: 220 V to 13,800 V
- Frequency: 50 Hz and 60 Hz
- Degree of protection: IP44, IP54 and IP55
- Insulation class: F and H
- Excitation: brushless PMG or auxiliary coil
- Number of poles: 04, 06, 08, 10 or 12
- Other features under request



Applications

Enclosed alternators can be applied in harsh environments with variable exposure to weather and corrosive and abrasive elements, typically found in oil & gas, petrochemical, mining and shipbuilding applications where a robust insulation system and adequate protection for the alternator is required.

Features	Benefits
Versatility	Customizable according to project needs.
Degree of protection	Different options of degree of protection, for better adaptation to the application and protection of the machine.
Performance	High level of efficiency with ability to meet the strict criteria of reactances and yields requested by the market.
Certification for explosive atmosphere	The project allows third party certification for explosive atmospheres, issued by international entities, meeting Atex and IEC-ex requirements.
Naval certification	Enables naval certification by the main classification societies, giving you the maximum guarantee of quality and reliability.



G Traction Line

Brushless (three-phase or polyphase) synchronous traction alternators are manufactured with steel plate or cast iron frame (depending on the selected protection level), meeting the requirements established in IEEE Std 11, IEC 60034, IEEE Std 115, IEC 60349 and IEC 61373, with focus on bus, trucks and off-road vehicles.

Technical features

- Output power: 260 to 2,455 kVA
- Frame: 160 to 500 (IEC)
- Voltage: 220 to 6,600 V
- Frequency: 50 and 60 Hz
- Degree of protection: IP23 and IP54
- Insulation class: 180 (H)
- Excitation: brushless
- Number of poles: 4 and 6
- Other features on request



Applications

Alternators applicable to road (buses, trucks), airport (buses, towing vehicles, load carriers, baggage tractors, passenger steps, conveyors, loaders), farming (tractors, sprayers, harvesters), building (pavers, compactors, excavators, drilling) and mining (off-road trucks, buses and hybrid trucks, excavators).

Features	Benefits
Permanent magnets on the exciter stator	Ensure built-up without requiring external power supply after long stops.
2/3 rd pitch winding configuration	Reduce harmonic distortion by affecting multiple harmonic components. The resulting effect is a cleaner and more stable output voltage.
Auxiliary coil	Provide precise and stable excitation voltage to the alternator's field windings. This can result in improved voltage regulation, ensuring that the alternator maintains a steady and consistent output voltage, even under varying load conditions.
Coil impregnation and protection	Developed with modern technologies, the VPI impregnation is used by WEG as a standard for 100% of stators, ensuring perfect insulation.

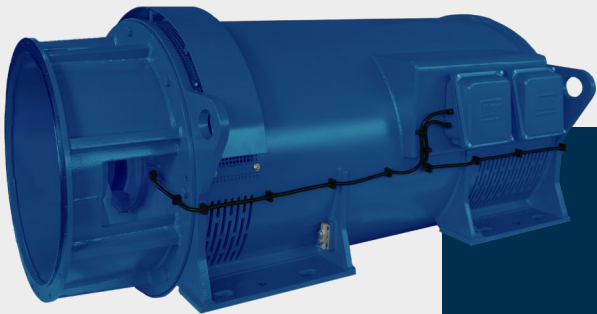


G Rail Line

Brushless or brush (three-phase or polyphase) synchronous traction alternators for railway application are manufactured with steel plate or cast iron frame (depending on the selected protection level), meeting the requirements established in IEEE Std 11, IEC 60034, IEEE Std 115, IEC 60349 and IEC 61373.

Technical features

- Output power: 100 to 4,000 kVA
- Frame: 250 to 900 (IEC)
- Voltage: 220 to 4,000 V
- Frequency: 50 and 60 Hz
- Degree of protection: IP23
- Insulation class: 180 (H)
- Excitation: brushless or slip ring
- Number of poles: 4 to 12
- Winding system with preformed coils
- Other features on request



Applications

Freight locomotives, industrial locomotives, rail maintenance vehicles.

Features	Benefits
Permanent magnets on the exciter stator	Ensure built-up without requiring external power supply after long stops.
Versatility	WEG presents flexibility in order to adapt the design, mounting and ventilation system to the customer technical needs.
Brushless or slip ring excitation	WEG and the customer define the excitation system according the locomotive specification, design and required performance. This selection is a result between several factors, among time response, range of speed and maintenance plan designed.



AN10 Line

An alternator with optimized performance, designed according to the naval standards especially to operate in marine environments. The product presents special electromechanical features which ensure durability, mechanical strength and robustness.

Benefits that WEG can provide through the high technology used in the products and knowledge of the application.

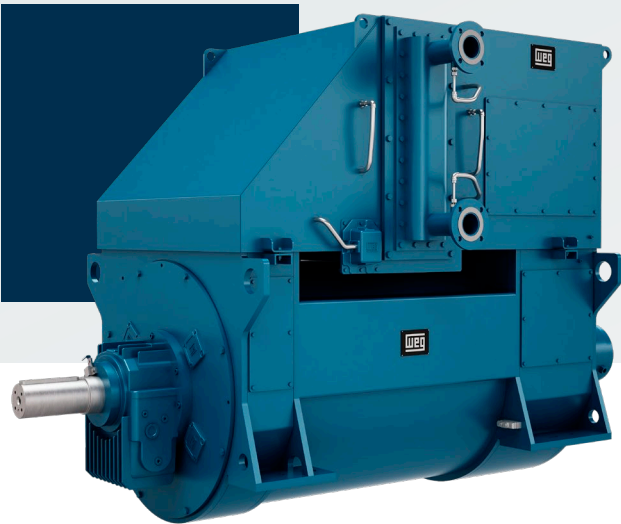
Technical features

- Output power: 1,100 to 3,000 kVA
- Frame: 450 to 560 (IEC)
- Voltage: 440, 690 and 4,160 V
- Frequency: 50 and 60 Hz
- Degree of protection: IP44 to IP55W
- Insulation class: 180 (H)
- Excitation: brushless
- Number of poles: 4

Applications

Especially designed to operate on ships and platforms, WEG alternators are used in different solutions including diesel electric propulsion, shaft generator, emergency or harbor application.

- Diesel Electric Propulsion (DEP) or shaft generator
 - Main, emergency and backup generation
 - PSVs (Platform Supply Vessels)
 - OSRVs (Oil Spill Recovery Vessels)
 - Navy patrol boats
- AHTSs (anchor handling tug supply vessels)
 - PLVs (Pipe Layer Vessels)
 - DRUs (Drilling Rig Units)
 - Pusher tugs, commercial vessels, tankers, etc.



Features	Benefits
Special coating, components parts and windings	High resistance to corrosion, environments with oil vapor, salt, high humidity and high temperatures.
Excellent performance	Electric project with high efficiency, reactances according to the needs of the application and low level of harmonics distortion.
Compact	Its reduced dimensions make it suitable for vessels with strict space limitations in the engine room.
Flexibility	A line that allows adaptation to each project.
Reliability	The product presents special electromechanical features which ensure durability, mechanical strenght and robustness.



SG10 Line

Designed to be used in many applications, the line meets the requirements of all industrial and marine segment, ensuring excellent performance in high powers.

From the main generation to the auxiliary generation, on land or sea, the line has the features to guarantee a reliable operation.

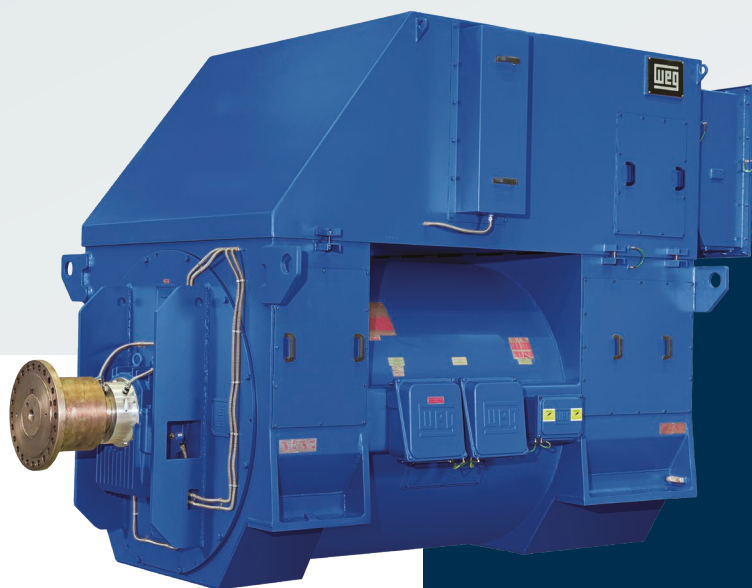
Technical features

- Output power: 3,000 to 50,000 kVA
- Voltage: 380 to 13,800 V
- Frequency: 50 and 60 Hz
- Degree of protection: IP23, IP44 to IP55
- Insulation class: 180 (H)
- Excitation: brushless
- Number of poles: 4, 6, 8, 10 and 12

Applications

Especially designed to operate where the application requires a custom product in order to provide the necessary performance. Used on platforms, ships and power plants.

- Diesel Electric Propulsion (DEP) or shaft generator
- Main, emergency and auxiliary generation
- PSVs (Platform Supply Vessels)
- DRUs (Drilling Rig Units)
- FPSOs (Floating, Production, Storage and Offloading units)
- Data centers, critical power



Features	Benefits
Robustness	Excellent performance in demanding applications.
Versatility	Can be supplied with air to air and air to water cooling or self-ventilated.
Low reactance	Meet the main load start requirements.

WEG difference

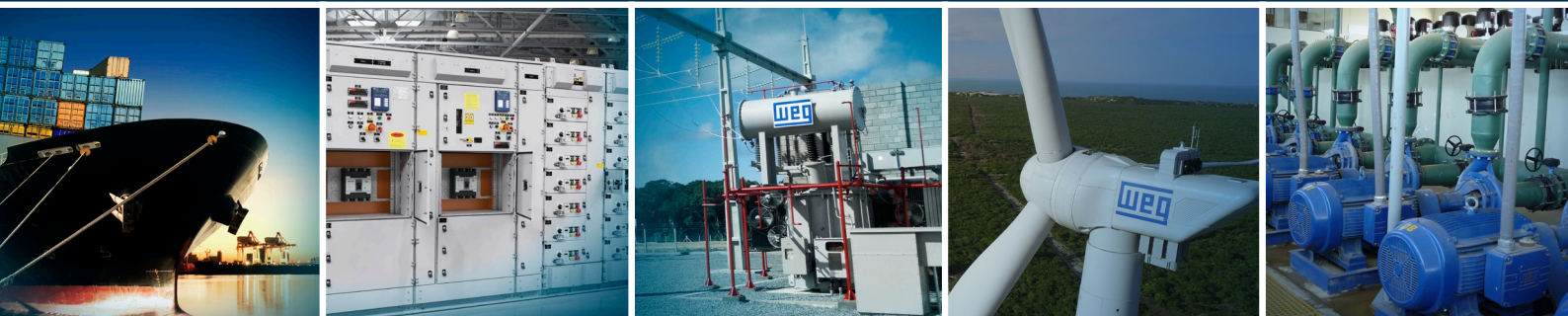
Vertical integration

WEG is a very vertically integrated company that manufactures its own varnish, electrical wires, enameling, casting, wood crates and several other components that are used on a daily basis in the manufacturing of many product lines.

This verticalization allows WEG to provide a greater flexibility to the customer, improved delivery times and a high level of quality standard in all stages of manufacturing.

Diversification

WEG's products and segments diversification in areas such as Automation, Energy, Motors, Transmission & Distribution, Coatings and several others allow WEG to provide a complete portfolio solution with greater flexibility to the customer.



Operational excellence

Based on the world-class manufacturing management systems, the WMS is a modern way to control and improve administrative and manufacturing process using a wide variety of consolidated methods, standards and modern tools.



Certifications

WEG's quality system is certificated as per the requirements of the standard ISO 9001 and ISO 9001/14001. The quality system is audited and certified by the Bureau Veritas Quality Institute. In order to operate in the most demanding markets, the synchronous alternators are certified by important institutions such as C.E. (European Community) and UL (Underwrites Laboratories).

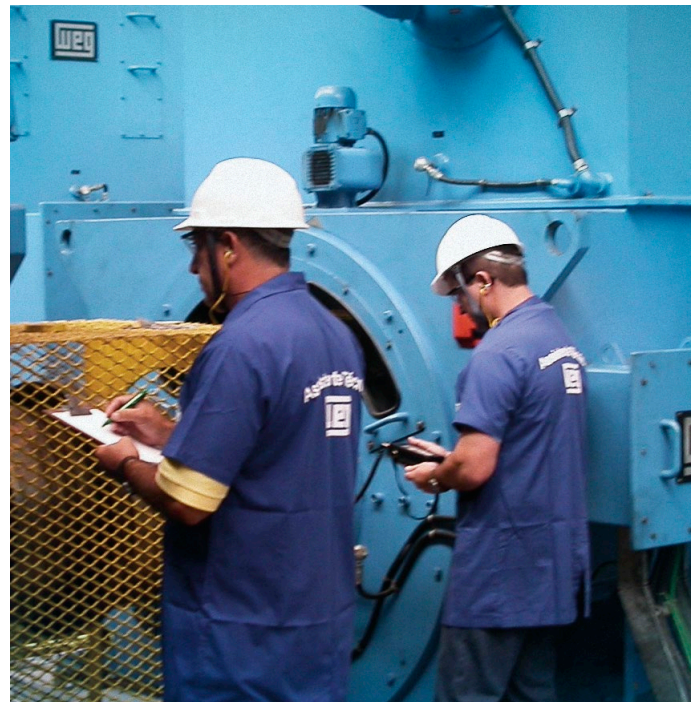
In the marine version, WEG synchronous alternators can be supplied, under request, with certifications of entities like: Lloyds, Bureau Veritas, ABS, Germanischer Lloyd, DNV and others



Technical assistance

WEG offers its customers technical assistance services, responsible for all the post-sale support. Those services include support to general questions and service in the field, including diagnostics, machine commissioning and operation 24x7. WEG's Technical Assistance network is present worldwide.

The technical assistance offers a qualified and experienced team, able to perform in different situations in the field and give remote support, using state-of-the-art equipment, providing reliability to the results.



Warranty

WEG warrants its products against defects in material and workmanship for a period of 12 (twelve) months from issue date of the factory invoice. In case of products purchased through retailers/distributors/manufacturers, the warranty will be of 12 (twelve) months from the issue date of the retailer/distributors/manufacture invoice, limited to 18 (eighteen) months from the manufacturing date.

The scope of WEG Group solutions
is not limited to products and solutions
presented in this catalogue.

To see our portfolio, contact us.

**For WEG's worldwide
operations visit our website**



www.weg.net



+55 47 3276.4000



energia@weg.net



Jaraguá do Sul - SC - Brazil

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The values shown are subject to change without prior notice.
The information contained is reference values.