

### Did you know you can enhance productivity and safety of your load handling operations with WEG's advanced variable speed drives?

With over 40 years of expertise, WEG delivers a comprehensive range of products and features designed to ensure safety, energy efficiency, operational reliability, and precise control for load handling applications.

# Find out other reasons to choose WEG products for load handling

In addition to being considered one of the largest manufacturers of electric motors on the planet, WEG is also one of the largest and most complete providers of end-to-end global solutions, with product lines focused on automation, energy generation and distribution, systems digital, electrification, and much more.

## **Everything the Load Handling sector needs:**



Safety and reliability



Cutting down operating costs



Increase to productivity



Maximize energy savings

# **In-house Research and Development**

With in-house research, development and testing laboratories, WEG provides customized solutions with efficiency and reliability, meeting the specific needs of each customer.

#### TURNKEY SOLUTIONS FOR

Automation and energy distribution

Sustainable energies

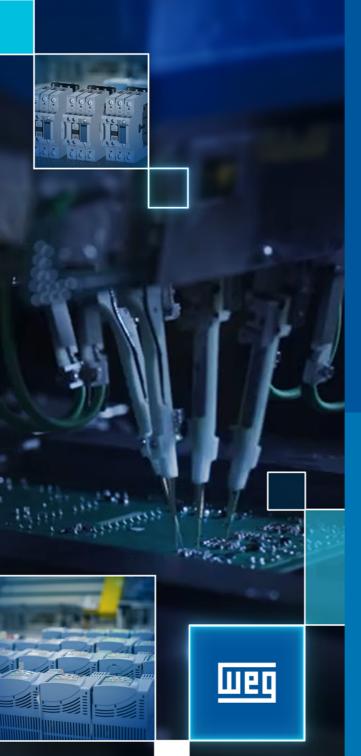
Electric mobility

Digital systems

Industrial coatings and clearcoats







# The numbers that support our solutions

years of experience in Brazil and around the world



+ **47,000** employees spread across all continents



+ billion drives and electromechanical

components ever

manufactured

a day

12,100

reforestation, 55% of which is made up of renewable resources and 45% of untouched native forest

#### A trusted name all over the planet



66 manufacturing sites in 18 countries



Commercial operations and technical support in 42 countries



Distributors in more than 120 countries

#### Wherever you are we are with you



Efficient and responsive technical support, available in over 113 countries



Maximize the lifespan of your equipment by close and personalized local support when you need it

#### A sustainable choice for your equipment



Leading global rating agency for corporate Sustainability Management



Leading global classification agency for Decarbonization Management



SUSTAINALYTICS

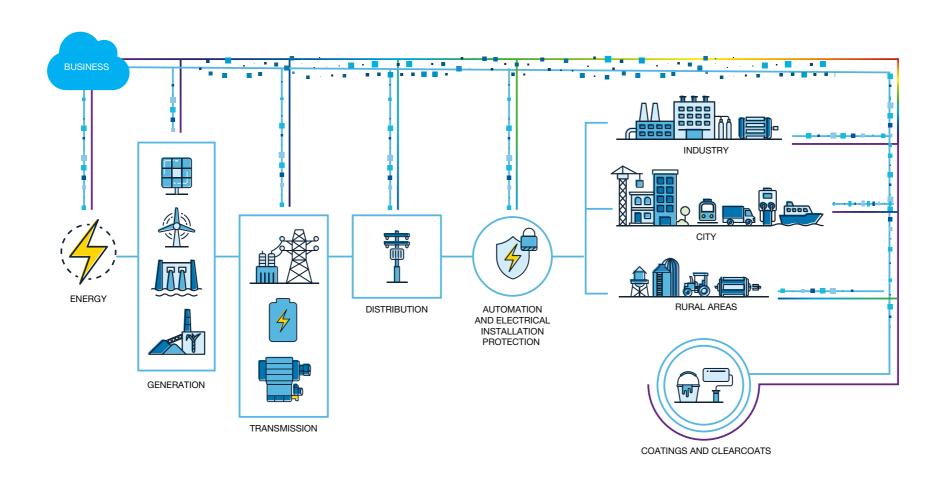
Measures company ESG risks

Find out more details in our Sustainability Report



#### (0) **Global presence** 66 MANUFACTURING SITES in 18 countries SPAIN -NETHERLANDS -GERMANY = AUSTRIA = ITALY | CANADA ••• • 2 manufacturing sites 1 manufacturing site 1 manufacturing site 1 manufacturing site 3 manufacturing sites 1 manufacturing site USA **■** ◆ +47.000 9 manufacturing sites Employees worldwide MEXICO •• • PORTUGAL 💆 🕶 4 manufacturing sites 1 manufacturing site CHINA 6 manufacturing sites COLOMBIA - + Distributors/ 2 manufacturing sites Agents in → INDIA 🔤 120 TÜRKIYE 🔼 ARGENTINA --- + countries 4 manufacturing sites 2 manufacturing sites 3 manufacturing sites BRAZIL 📀 18 manufacturing sites 凸 Sales to over **SOUTH •** ALGERIA **•** AUSTRALIA \*\*\* countries AFRICA 🔀 1 manufacturing site 1 manufacturing site 6 manufacturing sites COMMERCIAL OPERATIONS in 42 countries AFFILIATED COMPANIES **WEG Group** Algeria Chile ■ France Kazakhstan Poland Sweden Argentina China Germany Malavsia Portugal Switzerland Mexico Australia Colombia Ghana Russia Thailand Шец AUTRIAL AKH UE CESTARI <u>cem</u>p Balteau Austria Denmark India Netherlands Saudi Arabia Türkive Belgium Ecuador Indonesia New Zealand Singapore United Arab Emirates Brazil Egypt Italy Norway South Africa UK marathon VOLTRAIN ШЕП PPI-Multitask USA Canada Finland Japan Peru Spain

The global solution in electrical machines, automation and digitalization for industry, infrastructure, electric mobility and energy systems.





# WEG is safe load handling

Integrating WEG's variable speed drives (VSDs) into your Hoist and Overhead Crane applications delivers more than just functionality—it brings energy savings and total safety. Reduce daily maintenance and boost your business productivity.

WEG variable speed drives offer enhanced speed control and greater positioning accuracy, thus accelerating the load handling process. In addition, they provide smoother movements, increasing safety and extending equipment lifespan.

#### **Additional benefits:**



Built-in Soft PLC that functions as a PLC for flexibility and customized applications



User-friendly interface



Safety across all applications and environments





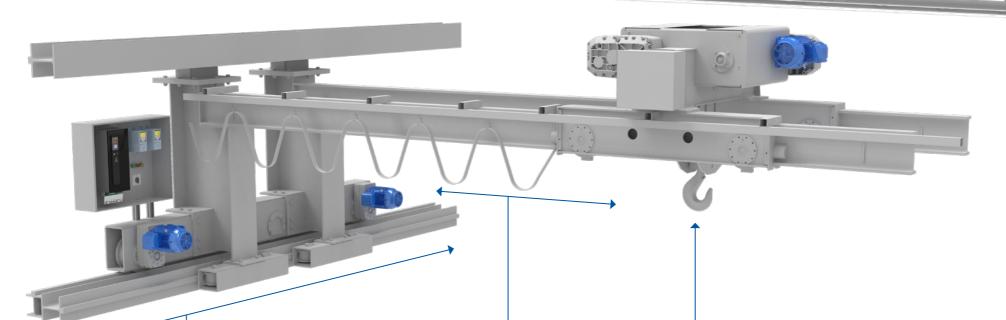






#### **WEG** solutions for load handling

AVAILABLE IN THE CFW500 AND ADV200 LINES



### Bridge Drive Horizontal movement

Certain crane models are designed to move horizontally along beams, enabling precise longitudinal transport of loads to the desired position. Paired with a motorization mechanism controlled by a variable speed drive, this system ensures highly accurate load positioning with maximum safety. The trolley, operated remotely, glides smoothly along rails integrated into the crane structure, facilitating the transport of heavy or bulky materials over long horizontal distances. This solution is widely used in shipyards, warehouses, and other industrial settings where efficient, controlled material handling is critical.

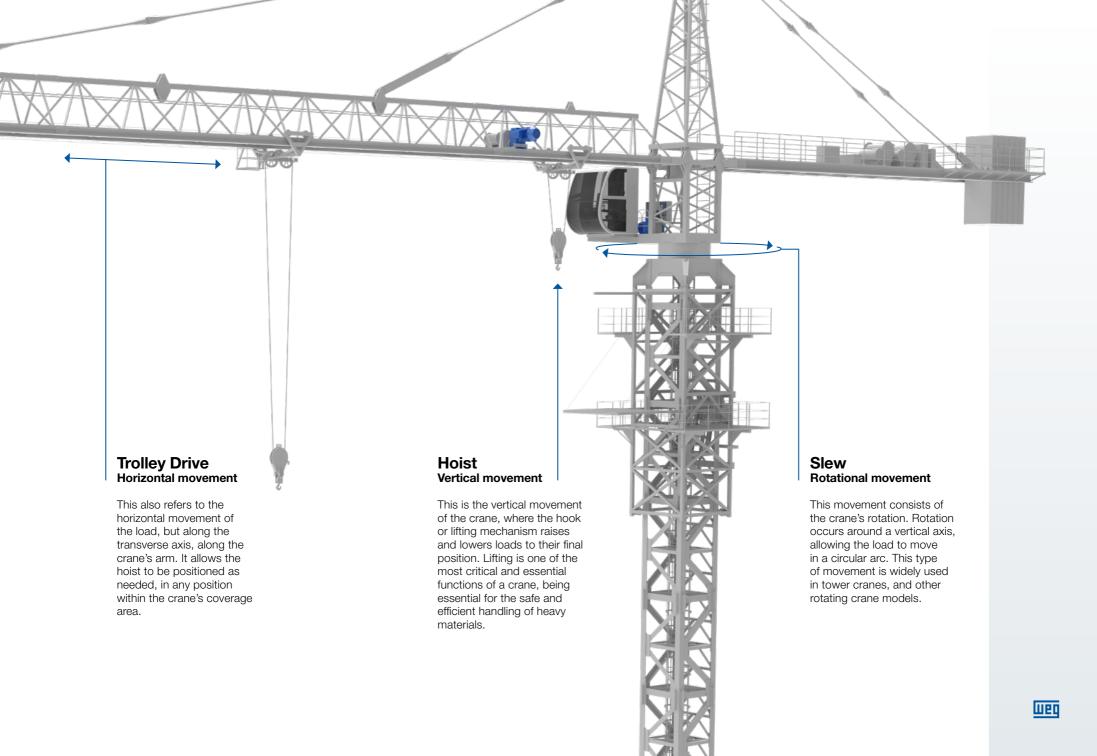
### Trolley Drive Horizontal movement

This also refers to the horizontal movement of the load, but along the transverse axis, along the hoist's support. It allows the hoist to be positioned anywhere within the crane's coverage area.

#### Hoist Vertical movement

This is the vertical movement of the crane, where the hook or the lifting mechanism raises and lowers loads to their final position. Lifting is one of the most critical and essential functions of a crane, being essential for the safe and efficient handling of heavy materials.





#### **WEG** solutions for load handling

AVAILABLE IN THE CFW500 AND ADV200 LINES

#### Key features dedicated to cargo handling



#### **Anti-sway**

It provides greater safety and efficiency by gently preventing mechanical oscillation during load movement. The hoist's VSD calculates the cable length and communicates with the gantry and trolley VSDs to ensure precise motion control.





When activated, the Zero Crossing function ensures a complete stop sequence upon receiving a reverse command during motor operation. The brake remains closed for an adjustable period before opening with a full start sequence to move the load in the opposite direction.

#### Overtravel and low-speed zone



They prevent the hoist, gantry, or trolley from exceeding permitted areas, avoiding collisions with other equipment or loads. The control uses external limit sensors connected to the VSD's inputs. When a limit sensor is activated, movement is only allowed in the opposite direction. This function can be used combined with the Low-Speed Zone function, automatically decelerating near limit switches for smoother maneuvers.

#### Overload



It protects the hoist system by detecting loads exceeding its capacity. The system measures torque current or motor torque to determine if the load is excessive, protecting the equipment integrity.

#### Anti-impact



It avoids load damage in case of impacts within the hoist's permitted movement area. In cases where impact is unavoidable, this feature mitigates the damage.







#### Multi-speed, Multi-ramp, and Potentiometer

The VSD supports up to four predefined speed references for both forward and reverse directions, along with four different acceleration times to configure a custom speed profile. It is also possible to define an "S" acceleration and deceleration profile, which improves the operator's working conditions, reduces mechanical stress on the crane and ensures smooth and fast movements. The Electronic Potentiometer function is used to control the reference with two digital inputs, one increasing and the other decreasing the reference.



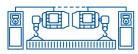
#### Acceleration

Acceleration of hoist movement under low load. When the load is below an adjustable threshold, this function reduces the lifting time by allowing the motor to exceed its rated speed. The maximum speed depends on the load relative to the hoist's rated capacity and the motor's characteristic torque curve.



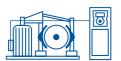
#### Master/Follower (Helper)

For high-power or redundant applications, two motors connected to a single gearbox can operate together with load sharing via two variable speed drives. If one motor fails, the other (master or slave) can continue operating independently.



#### Electric axis

Synchronized control with multiple axes. Double-hoist cranes are used for lifting and transporting long loads of varying lengths. The hooks must move synchronously during both elevation and horizontal displacement.



#### Brake control

Precise brake opening and closing with independent adjustments, paired with torque verification to ensure the motor generates sufficient force to hold the load securely. The brake feedback function further enhances operational reliability.

## Integration with WEG solutions such as:

motors, gearboxes, and limit switches, in addition to the whole line of motor starters and protectors, and circuit protection.

#### ADDITIONAL BENEFITS: -



Reduced cycle time



**Enhanced workplace safety** 



Protection against dust and moisture



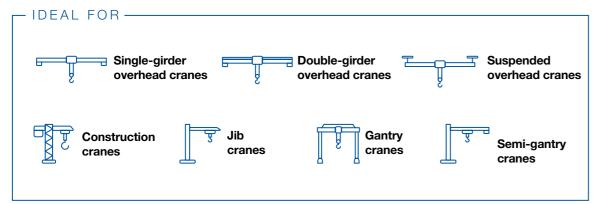
Protection against temperature variation

Some features are exclusive to only one of the WEG VSD models. Learn more about each of the differentials in our catalog or contact a sales representative. To use the special load handling functions, you need to download and install software/applications available on the WEG website.



# Reduce the carbon footprint of your operations





#### **Segmentos atendidos**



**Mining** 



Steel industry



**Automotive** 



Paper and cellulose



Logistics



**Civil construction** 



#### Why choose WEG?

For WEG, providing solutions that convey reliability to the customer also means caring for the environment and addressing sustainability in an integrated way. With that in mind, we offer a broad portfolio of products that deliver energy efficiency and advanced process technology to our customers. The good relationship with our partners, combined with our global production capacity (footprint), demonstrates our flexibility and ability to customize solutions for each type of application. We have global presence and local operations to uniquely meet your needs. In addition, we offer robust after-sales support through our global technical assistance network, ensuring service coverage worldwide.

WEG's expertise in industrial lifting has led to the development of a variable speed drive engineered with all the specialized functions required for the most common types of independent overhead cranes. Designed to enhance crane performance, ensure smooth and rapid movements, and prevent load damage during lifting and transport, the ADV200 also supports connection to regenerative power supplies, reducing energy consumption and reinforcing WEG's commitment to maximum efficiency systems

#### Umberto Del Grande

Product Marketing Department Manager, WEG Automation Italy



#### CASE

# Moving heavy loads requires trust. And WEG delivers.



# Complete automation of overhead cranes.

At Betim (MG) unit, WEG executed a comprehensive automation project for new overhead cranes in partnership with overhead crane manufacturers, showcasing the company's trust in its own solutions.

The project was managed end-to-end—from engineering to final delivery—covering supply, assembly, and testing. Custom-designed panels, tailored and assembled at our Itajaí (SC) factory, ensured reliability in every detail.

#### Technologies applied in the project:

- ADV200 Hoist and Crane VSDs specifically developed for lifting operations, delivering top-tier safety and performance.
- CFW500 and Controls Line—flexibility and robustness for seamless operation control.
- Free parameterization software—streamlined configuration, simplifying maintenance, and operation.

#### Benefits for the industry:

- Enhanced safety for critical load handling.
- Uninterrupted, reliable, and fault-free operation.
- Precision and control in every maneuver.
- End-to-end WEG solution, developed in collaboration with global leaders in load handling.

This project highlights how WEG combines proprietary technology, global expertise, and strategic partnerships to deliver high-performance automation solutions for cranes, gantries, and overhead cranes—always prioritizing reliability, efficiency, and safety.





# The complete solution in position switches for contact detection of rigid objects

Developed in accordance with international standards IEC/EN 60947-5-1 and UL 508, the LSW limit switch line offers a wide range of snap and slow action contacts and heads, in addition to positive opening NC (normally closed) contacts. Solving various applications in machines and equipment, the LSW line can be used for indicating, detecting, limiting, monitoring and counting rigid objects.

#### **Benefits**



#### Compact

Little space required in the application due to its reduced size



#### Modular

Interchangeable contacts and a great variety of heads



#### **EASY INSTALLATION**

Shorter assembly time, as the switches are assembled at the factory









KNOW MORE ABOUT
MOTORS AND GEARBOXES

# Efficiency and reliability for the industry

High performance with maximum energy efficiency. This is the most important feature of WEG's electric motors and gearboxes.

Considered as one of the world's largest electric motor manufacturers, this Business Unit offers solutions for several types of applications, from commercial and residential to industrial, always focusing on customer needs. The development of products focused on the real needs of customers results in a high degree of satisfaction due to the versatility, reliability and durability confirmed in the most severe applications.

In addition to commercializing its products through the network of Branches, Distributors and Agents, WEG provides service support to customers, after-sales services for specific applications and installations, through its qualified Service Agents Network.



#### Efficiency

WEG manufactures a complete line of electric motors complying with and even exceeding all global markets required efficiency levels.

Our commitment to sustainability leads us to research new technologies to produce high effciency products.

A simple company. Our vertical process guarantees the design and manufacture of an electric motor specially designed for your application, at the time you need it.

Improved efficiency motors providing higher reliability with lower operating cost, which results in a more effective production process.

#### Reliability

WEG is a vertically integrated company, with the largest manufacturing site of electric motors in the world, all in one place.

Investments in research and technology innovation and continuous improvements in our production processes allow us to manufacture high reliability electric motors.

A qualified team of engineers is dedicated to design electric motors with:

- Higher efficiency
- Reduced size, vibration levels and temperature
- High reliability
- Lower operating cost





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