

# W60 MOTOR

Compact in size,  
giant in performance



Motors | Automation | Energy | Transmission & Distribution | Coatings



# COMPACT IN SIZE, GIANT IN PERFORMANCE

The W60 line motors present an optimized and robust design, with excellent power density. The concept allows adjustments that guarantee high performance in environments with the most varied temperature ranges complying with several industrial applications, such as compressors, pumps, fans and mills, and are even capable of speed variation and operation with frequency inverters and soft starters.

The W60 line complies with the most stringent criteria for efficiency, reliability and safety.

## BENEFITS



Suitable to operate in severe conditions and aggressive environments



Flexibility in electrical and mechanical design



Suitable for applications with low inrush current and high efficiency



Optimized and robust design with excellent power density



## SEGMENTS

The W60 line motors were designed using the most modern computer programs and mathematical tools for numerical, static, dynamic, thermal and electromagnetic simulations and analyses, thus optimizing the design of each component and their respective interactions.

The extensive versatility of the W60 line allows the application of motors in the most diverse segments, such as: oil and gas, mining, power generation, water and wastewater, cement, pulp and paper, sugar and ethanol, steel, among others.



Versatility that allows different configurations



Durability, resistance and robustness



Reduced motor weight, allowing for base optimization and reduced installation costs

# TECHNICAL CHARACTERISTICS

## Scope

- Rated output: 185 up to 16,000 kW
- Number of poles: 2 up to 12
- Frame size: 315 up to 1,000 (IEC)
- Duty: S1
- Degree of protection: IP23, IP24W and IP55
- Voltage: 400 up to 13,800 V
- Frequency: 50 and 60 Hz
- Service factor: 1.00 and 1.15
- Cooling system: IC01, IC611 and IC81W

## Standard Features

- Starting method – DOL (Direct On Line)
- Class F insulation
- Rotation direction: unidirectional or bidirectional
- Form wound or random wound
- Grease-lubricated bearings
- Insulated rear bearing
- Space heater
- Stator connection box with IP66 protection degree
- RTD Pt-100 temperature sensor, two per phase
- RTD Pt-100 temperature sensor, one per bearing
- Water leakage sensor (for IC81W cooling type)
- Air inlet filter - AISI 304 stainless steel (for IC01 cooling type)

## Optional Features

- Starting method: VFD or soft-starter
- Class H insulation
- Double vacuum impregnation (VPI)
- Shaft end grounding brush
- Insulated front bearing
- Oil-lubricated hydrodynamic bearings
- Copper rotor
- Degree of protection: IP56 and IP65 (IP66 with roller bearing only)
- Air filters
- Differential pressure switch
- Water leak detector (water cooled)
- Thermometers
- Encoder (frequency inverter operation)
- Surge protection (lightning rods and capacitors)
- Vibration sensors (acceleration, speed and displacement)
- Various others available upon request



*Note: other features on request.*

# PROJECT DETAILS



## Frame

The frame of W60 line was developed through computer simulations, providing high rigidity, low vibration and noise levels.

## End Shields

- Reinforced structure
- High quality cast iron or carbon steel

## Vibration Level

The W60 motor provides a rigid structure that allows operation in severe environments, suitable for high impact and speed applications, providing reliable operation with low levels of vibration and noise.

## Cooling System

The W60 line maximize the use of active material and optimize the cooling system, reducing engine losses and increasing its efficiency.

- Increased air flow
- Low ventilation loss
- Easy assembly
- High mechanical resistance

## Performance

The W60 line maximize the internal use of the frame, reducing motor losses and increasing efficiency.

## Certifications

- Certifications for use in non-hazardous areas: CE, UL, CSA, EAC, GOST-R
- Certifications for use in hazardous areas:
  - Ex ec IIB or IIC T3 or T4 Gc (increased safety, level of protection "ec")
  - Ex eb IIB or IIC T3 or T4 Gb (increased safety, level of protection "eb")
  - Ex tc IIIB or IIIC T125 °C or T160 °C Dc (dust ignition protection by enclosure "t")
  - Ex tb IIIC T125 °C or T160 °C Db (dust ignition protection by enclosure "t")
  - Ex pzc IIB or IIC T3 or T4 Gc (pressurized enclosure)
  - Ex pxb IIB or IIC T3 or T4 Gb (pressurized enclosure)
  - Class I, Division 2, Groups A, B, C and D, Temp. Cod. T3B or T3C or T3 (non-incendive)
  - Class II, Division 2, Groups F and G, Temp. Cod. T3B or T3C (dust ignition proof)



# TESTING LABORATORIES

WEG motors and generators are tested according to NBR 17094-3, IEC 60034, NEMA MG 1 or API standards in modern laboratories. Capable of testing machines with rated output up to 20,000 kVA and voltages up to 15,000 V, WEG testing laboratories have high-precision controls and fully computerized test monitoring systems.

The tests are divided into three categories: routine, type and special tests. Routine tests are performed on all motors. Type and special tests can be performed upon customer request.



Surge test



Control room

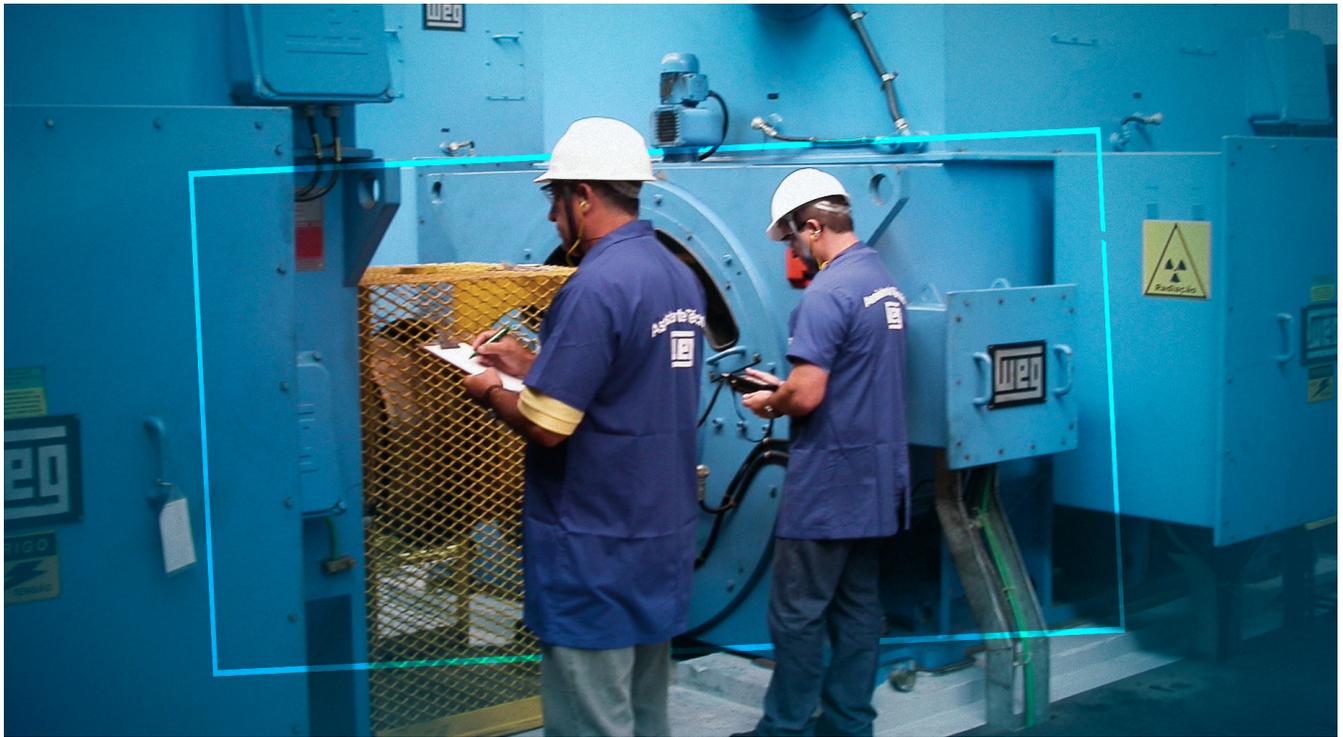


Test laboratory

## TECHNICAL ASSISTANCE

WEG provides its customers with technical assistance services, responsible for all after-sales support. These services include general queries attendance and field service, including diagnosis, machines commissioning and 24-hour duty (+55 47 3276-6969). WEG also provides its authorized technical assistance network, present throughout Brazil and worldwide.

The technical assistance has a trained and experienced team, capable of the most several field situations and remote support, using the latest equipment, bringing reliability to the results.



## SERVICES

To recover medium and large electric machines, count on the WEG service team.

The products are overhauled and recovered using the same technology as in the new products manufacture. The services are performed in field (at the customer's own) or at the factories in Jaraguá do Sul/SC, Sertãozinho/SP and São Bernardo do Campo/SP, which are also approved for services on equipment used in explosives atmospheres. In these factories all procedures and support of engineering, industrial processes and quality control departments are available, performing services with agility and quality.

### Service of **WEG products and other brands:**

- DC motors and generators
- Three-phase induction motors (squirrel-cage or slip-rings, medium and high voltage)
- Synchronous motors (with or without brushes, medium and high voltage)
- Synchronous condensers
- Turbogenerators
- Hydrogenerators
- Wind turbines
- Steam turbines
- Hydraulic turbines

**WEG Services:** flexibility, agility and experience to optimize your time and productivity.



For WEG's worldwide  
operations visit our website



[www.weg.net](http://www.weg.net)



 +55 47 3276.4000

 [energia@weg.net](mailto:energia@weg.net)

 Jaraguá do Sul - SC - Brazil

Cod: 50043982 | Rev: 05 | Date (m/y): 06/2022.

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