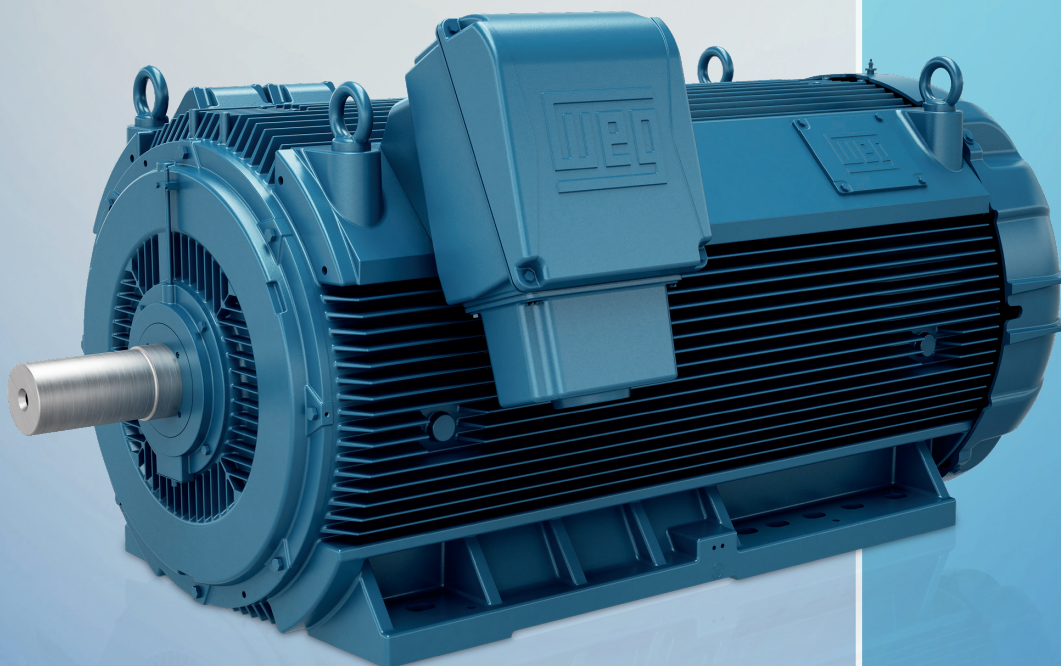


THREE-PHASE INDUCTION MOTORS HGF

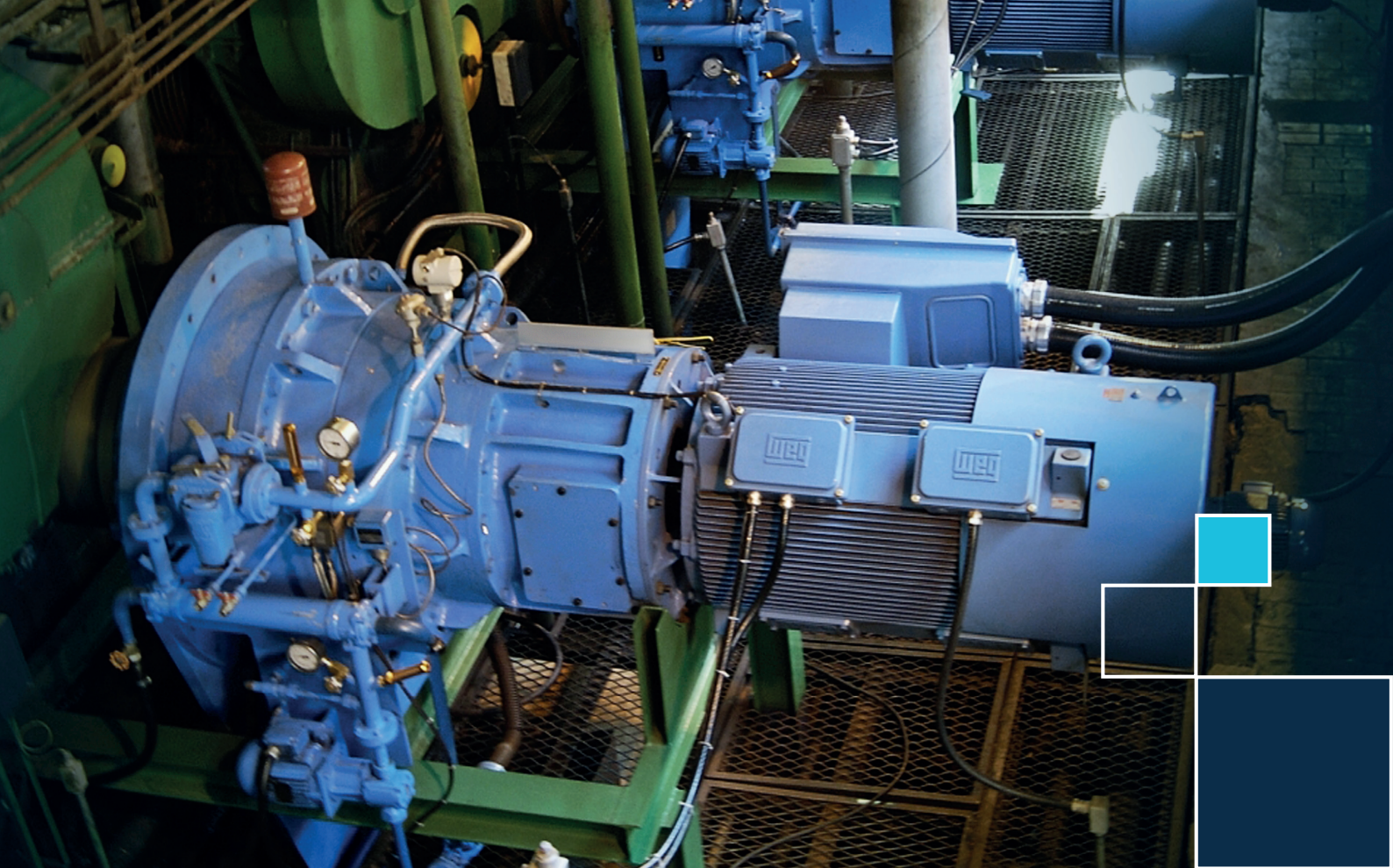
High performance
for applications that
demand high
resistance

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



Driving efficiency and sustainability





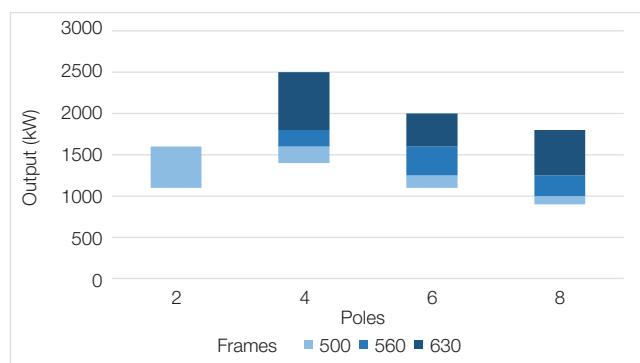
HGF Three-Phase Induction Motors

The HGF line stands out by its high performance combined with low maintenance costs. This product line is ideal for operating in the most severe applications, which require high resistance and durability of motors.

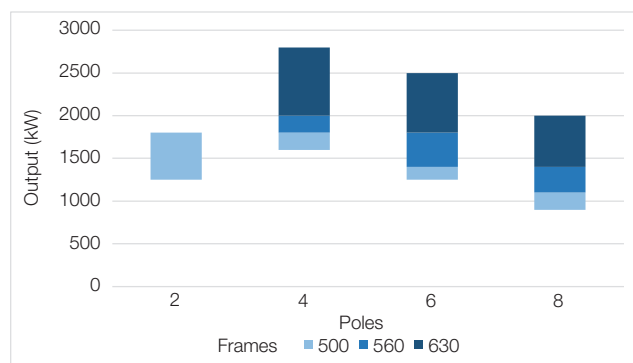
The HGF motors are designed according to the highest technological standards, using modern computer software for mechanical, electrical and thermal analysis and proven through rigorous control and tests. The result of this innovative development is a flexible product, complying with international standards and fully aligned with world market trends. This emphasizes WEG's commitment not only to our customers, but also to the environment as WEG develops more and more optimized global solutions for its products and processes.

With an updated design, the HGF motors present excellent performance levels, with one of the best rated power density of the market.

Output x poles x frame size (4,160 V - 50 Hz)



Output x poles x frame size (4,160 V - 60 Hz)



*Notes: 2 pole motors are available in 500 frame sizes on request.
Larger output ratings are available under request.*

Product overview

Standard features

- Rated output: 355 up to 2,800 kW
- Number of poles: 2 up to 12
- Frame sizes: IEC 500 up to 630
- Frequency: 50 or 60 Hz
- Voltage: 2,300 up to 6,600 V
- Service factor: 1.00
- Insulation class: F (DT 80K)
- Degree of protection: IP55
- Mounting: vertical or horizontal
- Cooling Method: TEFC (IC411) – Totally Enclosed Fan Cooled
- Enclosure material: FC-200 cast iron
- Fan covers material:
 - Frame 500 - FC-200
 - Frames 560 and 630 - Steel
- Fan material: aluminum
- Terminal box material: FC-200 cast iron
- Accessories terminal box material: FC-200 cast iron
- Thermal protection:
 - Windings: Pt-100 3 wire, 2 per phase
 - Bearings: Pt-100 3 wire, 1 per bearing
- Bearings:
 - Frame 500: ball bearings, grease lubricated
 - Frame 560-630: roller bearings, grease lubricated (except for the frame 630, 4 poles - oil lubricated)
- Rear cover with insulated bearing
- Bearing seals:
 - Labyrinth Taconite seal for grease lubricated bearings
 - Mechanical seal for oil lubricated bearings
- Vibration: grade A (IEC)
- Balance: with half key
- Shaft locking device for bearing protection during transportation
- Nameplate: AISI 304 stainless steel (laser inscribed)
- Drain: automatic T-type
- Space heater
- Color: RAL 5009 (blue)

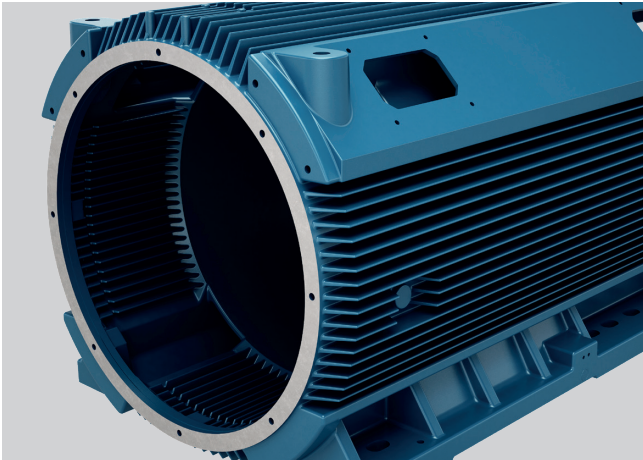
Optional

- WEGscan sensor
- Noise suppressor
- Service factor: 1.15 (safe area only)
- Suitable for VFD application
- Encoder
- Degree of protection: IP55W or higher
- Mounting: other mounting configurations
- Cooling method: TEBC – Totally Enclosed with Forced Ventilation (IC416)
- Fans: FC-200 cast iron
- Canopy for vertical mounting
- Terminal boxes: steel welded terminal boxes
- Second terminal box:
 - for “Y” connection with accessible neutral terminal
- Cable gland: plastic, brass or stainless steel threaded
- Thermal protection: bimetallic thermal protection, thermistor (PTC) or calibrated Pt-100 for alarm or tripping, at windings or bearings
- Thermometer on bearings with gauge with/without contacts
- Bearings:
 - Oil lubricated bearings
 - Sleeve bearings
 - Bearings designed for vertical mounting normal or high thrust applications
 - Drive End Shaft Brush for VFD applications
- Front cover with insulated bearing for VFD applications
- Vibration: grade B (IEC)
- Provision for SPM and/or vibration sensors
- Surge protection: lightning arresters and capacitors
- Stainless steel hardware
- Internal epoxy coating (tropicalization)

Other features available under request

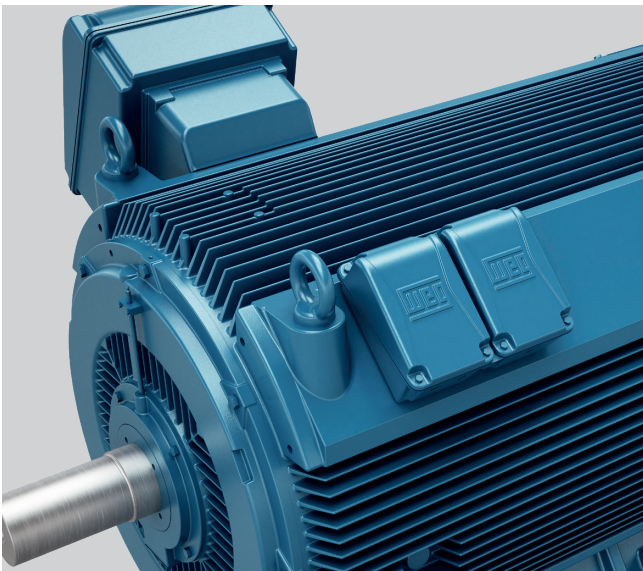
- Voltage: low voltage and 6,900 to 11,000 V
- Service factor: > 1.00 for hazardous area or > 1.15 for safe area
- Insulation class: F (105 K), H (80 K, 105 K or 125 K)
- External oil circulation system for sleeve bearing
- CT for differential and integral protection
- Power factor correction capacitors
- Signal transducer
- Special shaft dimensions
- Non-reverse ratchet
- Base: rail, sliding base, extended feet, soleplate, anchor plate
- Number of poles: 14 and above
- Hazardous area: Ex eb
- Cooling method: non-ventilated (TENV) and air over (TEAO)

Features and benefits



Frame

Frame structural design optimized for best combination of mechanical rigidity and thermal dissipation, reducing motor vibration and increasing lifetime. The HGF motor frames consist of a single piece of high strength cast iron. External and internal fins, in conjunction with the fan and fan cover, provide the maximum heat dissipation possible for a self-ventilated motor, thus enabling increased levels of rated power per frame size and avoiding the overheating of the motor. The cast iron FC-200 produced by WEG foundries provides the HGF motors with high resistance and durability.



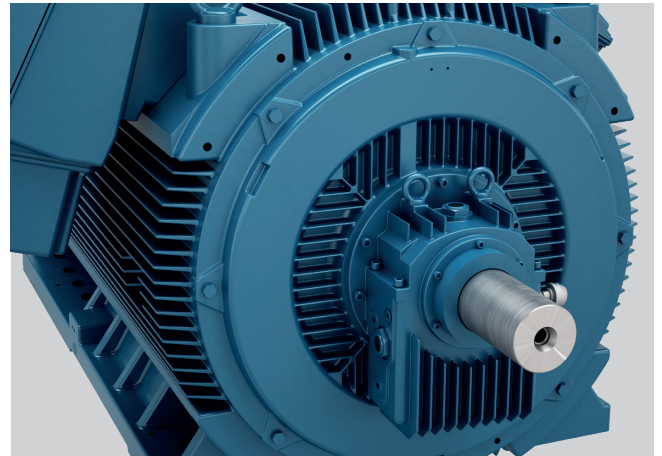
Terminal box

The main and accessories terminals are supplied inside two different terminal boxes, manufactured in the same material of frame. This ensures a high mechanical resistance, not only for the terminal boxes, but for the entire motor, resulting in more durability and larger lifetime. The accessories terminal box is designed with two separated compartments, one for thermal protections and another for space heaters. Through its oversized dimensions and versatility, the motors will offer easy connection, and can be supplied according to the customer's preference, with flying leads, terminal pins or screws (for high voltage motors). Under demand, the motors can be supplied with steel constructed terminal boxes, and, with a second main terminal box for Y connection with accessible neutral.



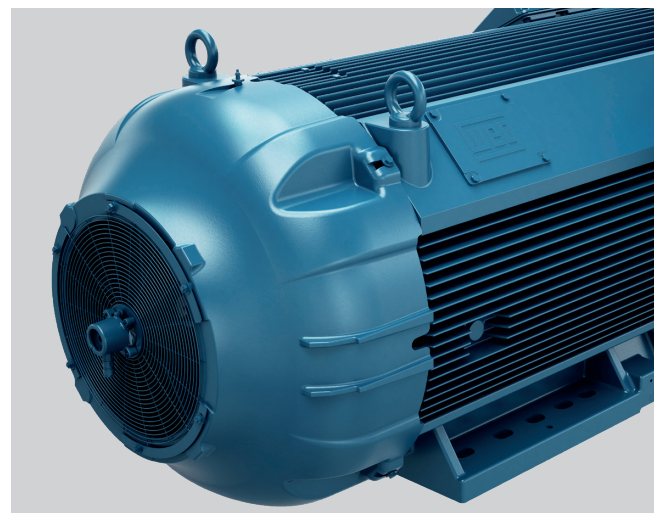
Sleeve bearings

Motors may be fitted with sleeve bearings as an optional feature in direct coupling applications. Sleeve bearings present lubrication intervals up to three times longer than conventional bearings, and a similar lifetime of the electric motor. Another characteristics of this type of bearing are the low operating noise level and capability of higher speed operation when compared to conventional bearings.



Fan cover

The fan cover was designed to direct airflow over the entire frame with minimal recirculation in the motor interior, allowing maximum heat exchange and resulting in a cooler motor.



Sound pressure level

The design of the HGF line ventilation system provides an optimized air flow, enabling a reduction in sound pressure levels. This reduction is possible through different configurations of the ventilation system, such as the use of a deflector with a noise suppressor or even the option of using a fairing on the frame.

Dedicated HGF lines

The HGF motors can be adapted to the most different needs. The HGF platform also contains product families (according to relevant standards, IEC or NEMA) to suit specific requirements and applications, always considering the best solution for the customer.

HGF general purpose line

One of the greatest benefits offered by the HGF motors is the **flexibility**. Due to its production process, WEG can manufacture a tailor made motor according to customer specifications. This makes the HGF the perfect product for drop-in replacement motors in any kind of application. The versatility is exemplified by the several mounting configurations and characteristics such as special built bases (rails, sliding base, anchorage plate, etc).

The flexibility on mounting allows the construction of these motors in higher degrees of protection, up to IP66W, suitable for the most aggressive environments, such as **Siderurgy Industries** applications, where SO₂ gases, vapors, solid contaminating agents, high humidity, alkalis, and solvent drips are constantly present.

HGF motors can be designed to be driven by frequency inverters, offering a precise control, an important factor for **Sugar and Ethanol Industry**. Special applications such as cane shredders and grinders require speed variation in variation in severe conditions, with high degree of protection and high starting torques which can be provided by the HGF line. Furthermore, the “Ex-ec” line can also be applied in hazardous areas.

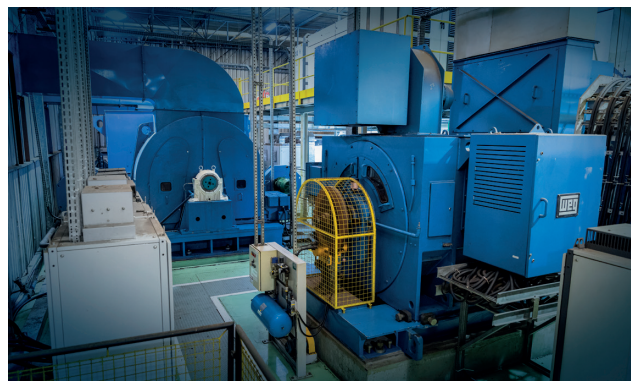
Precision and reliability are also essential in the **Pulp and Paper Industry**. In the coiling machine, for example, one of the most critical applications, an accurate speed control and mechanical resistance are demanded. As this is a critical part of the process, the HGF motors are widely used on it, offering low maintenance and high performance levels. For the several other motor applications in this industry, the motors can be supplied with special painting plans and stainless steel screws, resulting in longer lifetimes in the aggressive and corrosive environments.



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.



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. 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
- Alternators

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



The scope of WEG Group solutions
is not limited to products and solutions
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The values shown are subject to change without prior notice.
The information contained is reference values.