Industrial Motors

Commercial & Appliance Motors

Automation

Digital & Systems

Energy

Transmission & Distribution

Coatings

THREE-PHASE INDUCTION MOTORS M MINING

Greater **reliability**, less **maintenance**

Driving efficiency and sustainability

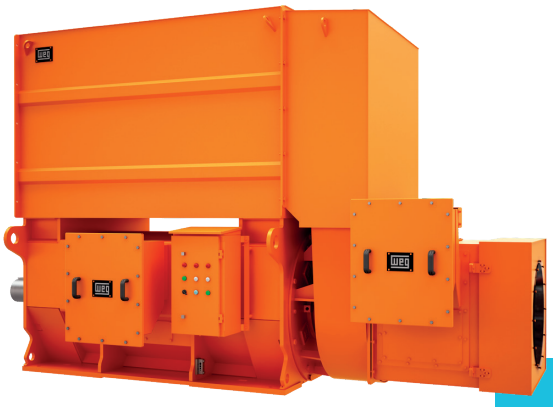
M Mining - Three-Phase Induction Motors

To provide an effective solution for the mining and cement segments, WEG developed the M Mining line. These motors have a superior degree of protection, ideal for dust environments, and a new brush system for the wound-rotor motors.

The design was specially developed with electromechanical characteristics which provide durability long life operation, strength and robustness. They can operate in dust environments as found in cement and mining industries, susceptible to sun exposure installations that are able to withstand water projected in powerful jets and permanent contact with suspended ore/cement particles accumulated on the equipment. For this reason, the motors have a degree of protection up to IP66 and are mainly used in mills (rollers, balls, bars, SAG), crushers, fans, exhaust fans, conveyor belts, wheel loaders and winches, centrifugal pumps, rotary kilns, electric excavators among others.

Characteristics

- Rated output: 250 up to 10,000 kW
- Frame: 355 up to 1,000 (IEC)
- Voltage: 220 up to 13,800 V
- Number of poles: 2 to 14 (squirrel cage motors)
  4 to 14 (wound-rotor motors)
- Frequency: 50 and 60 Hz
- Degree of protection: IP55 and IP56 (sleeve bearings)
  IP55 to IP66 (anti-friction bearings)
- Standards: IEC/NEMA
- Integrated control system for motors with liftable brush holders



Wound-rotor motor with liftable brush holder

Features and benefits

Brush lifting mechanism

The mechanism is now simplified, with significant reduction of parts and components, making the maintenance even easier.

Liftable brush holder drive system

The drive system was optimized using reducers and inductive sensors.

Liftable brush holder control system

A control system was incorporated into the motor, containing the operation logic of the brush lifting system. The goal was to combine a robust and easy implementation project in the application (only 2 input signals and 3 output signals).
The control system has the capability to investigate faults and monitor system operation via integrated HMI, facilitating system maintenance, preventing undue maneuvering in the brush holder system and the main motor drive, and increasing safety in the motor operation.

Access to the liftable brush holder compartment

The slipe rings compartment has large inspection windows for easy maintenance.

Stainless steel hardware

Motor Line with stainless steel hardware. This way, avoids the corrosion process in screws, nuts, washers, and others.

Inspection window

All brushes are positioned facing the side of the inspection window, allowing full access for brushes exchange. Constant pressure springs are used to reduc brush wear.

Constructive form of fixed brush holder

The mechanism is now simplified, with significant reduction number of parts and components. It makes possible reversing the construction of the brush holder. It also has a filter in the ventilation circuit to prevent brush powder accumulation.

Position of the fixed brush holder insulators

The new assembly reduces dust accumulation in the brush holder and allows the axial adjustment of the insulators and brush holders.

Fixed brush holder cooling system

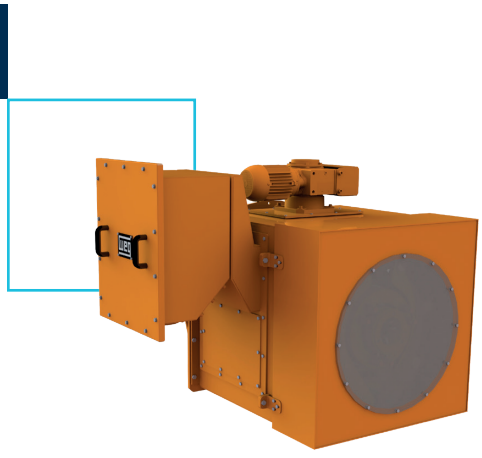
The cooling system of the brush holder is independent of the motor cooling system, increasing its efficiency.

Painting plan

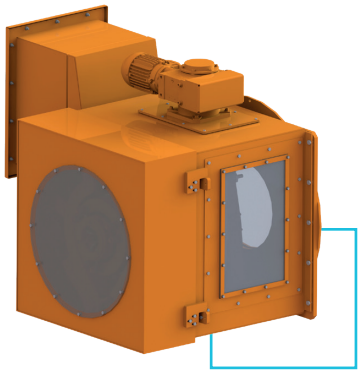
M Mining motors are protected by the high performance WEG paint system, capable to withstand 240h test in the ASTM 117B saline mist chamber.
It allows operation in abrasive and humid environments with SO_2 presence.

IP66 protection

To ensure the IP66 protection level, special seals are used in all connecting and sealing joints of the bearings. The sealing system protects the motor from pollutants, which may cause serious damages to the motor.



Liftable brush holder



Fixed brush holder

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

Cod: 50078658 | Rev: 01 | Date (m/y): 03/2023.