

# ABB induction motors for the mining industry

## Optimized for improved reliability and safety



ABB induction motors have been enhanced with increased protection ratings up to IP66, and an engineered dust shield and robust fan cover. These features ensure protection against dust, water and rocks in harsh conditions, making these motors the ideal choice for mining applications.

### Minimized downtime, improved efficiency

The new optional features are available for ABB modular induction motors, type AMI, and high voltage rib cooled motors, type AXR and HXR.

The increased protection ratings up to IP66, engineered dust shield and robust fan cover ensure low maintenance, improved reliability, safety and an extended motor lifetime. This means minimized downtime, improved efficiency and a lower cost of ownership.

High ingress protection marks a significant advance for high voltage electric motors, as there have previously been few products on the market offering the IP66 rating. The design of ABB's motors has been verified by a leading independent testing organization. Higher protection is especially important for applications where dust and water are present, such as in the mining and cement industries. IP66 means that the enclosure is

completely dust tight and will withstand powerful water jets.

The engineered dust shield prevents dust from blocking the air flow between the cooling channels. It also protects the motor frame against damage from rocks in underground and open pit mines. This prevents unplanned downtime, as only the dust shield needs to be changed in case of damage, without the need to stop the motor.

The robust fan cover protects the fan against falling rocks. This prevents damage to the fan, which could affect the motor's cooling system and result in downtime while repairs are carried out.

In addition, maintainability is enhanced by features like the brush set for cleaning the air-to-air cooler, and rating plate with raised font. A stainless steel cover is provided to protect the pulse encoder, preventing damage to a sensitive component.



- 01 Rib cooled motor, AXR
- 02 Modular motor, AMI
- 03 Rib cooled motor, HXR

— **Technical specifications**

**Modular induction motor, type AMI**

- Output power: 150 to 8,000 kW
- Frame sizes: 400 to 630
- Cooling method: Air-to-air
- Mounting: Horizontal or vertical
- Bearings: Antifriction
- Supply: Direct-on-line or fed via variable speed drive

**Rib cooled motor, type AXR**

- Output power: 100 to 1,800 kW
- Frame sizes: 315 to 500
- Mounting: Horizontal or vertical
- Bearings: Antifriction
- Supply: Direct-on-line or fed via variable speed drive

**Rib cooled motor, type HXR**

- Output power: 100 to 2,250 kW
- Frame sizes: 355 to 560
- Mounting: Horizontal or vertical
- Bearings: Antifriction
- Supply: Direct-on-line or fed via variable speed drive

**Your reliable partner**

ABB motors are based on reliable designs, proven in thousands of mining installations, and provide high productivity in demanding conditions.

With ABB you always have a partner to discuss different motor solutions to optimize your process. Our services do not stop at sales. We make it easy for you to reach us at every stage of your motor's life cycle. Our extensive global network provides local service delivery whenever and wherever you need it. The global service network includes over 60 service centers and more than 150 authorized service providers.

We offer predefined maintenance programs for all lifetime phases of all ABB motors, and preventive diagnosis and updates can help to further boost your competitiveness when needed. Our advanced condition monitoring systems detect potential problems at a very early stage, before they become serious. By enabling precisely targeted and timely maintenance, these systems help to reduce downtime and therefore lower the overall cost of ownership.

— For more information please visit:  
**[abb.com/motors&generators](http://abb.com/motors&generators)**

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