

Mining & Aggregate Industry

Facilities Maintenance Electric Motor Guide



INTEGRAL AND TITAN®
REPLACEMENT MOTORS





Nidec Motor Corporation makes it easy to find the right, energy-efficient U.S. MOTORS® brand replacement motor.

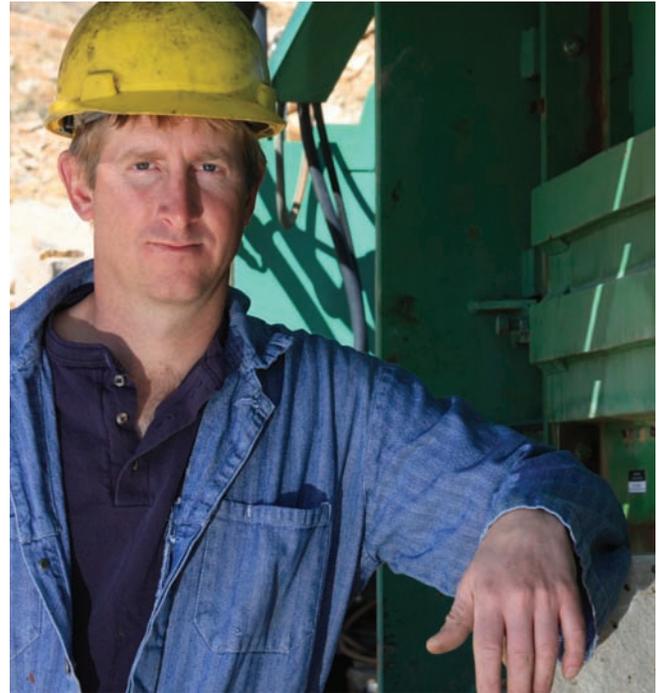
Electric motors are an integral part of mining and mineral processing, especially high altitude mining where rigorous atmospheric challenges add to the usual dusty, dirty environments of a mine. Motor and system efficiency will always be a driving force in the mining business. When you need a motor that will provide peak performance in extreme conditions. U.S. MOTORS® brand products have been used extensively in all mining applications, especially in regions with the highest elevations, such as the Andes in South America. U.S. MOTORS brand motors are engineered to ensure your motors perform in the harshest environments.

Looking for a direct replacement integral motor? Look no further. The U.S. MOTORS line offers an extensive portfolio of replacements and we have the tools—both eBusiness, and motor specifications and technical data, to connect you with the right motor quickly at ecatalog.motorboss.com:

- Competitive cross reference tools
 - More than 50,000 cross references by competitor or OEM catalog and model numbers.
- eCatalog search tool (search by ID, features or applications)
- Online chat
- Dimension prints
- Nameplate data
- 3D models
- Performance data
- Wiring diagrams
- Installation and maintenance manuals

The U.S. MOTORS line of products, as well as a full complement of production and facilities maintenance solutions, is available locally and throughout the world:

- On hand inventory at local distributors
- Authorized service stations—warranty and repair

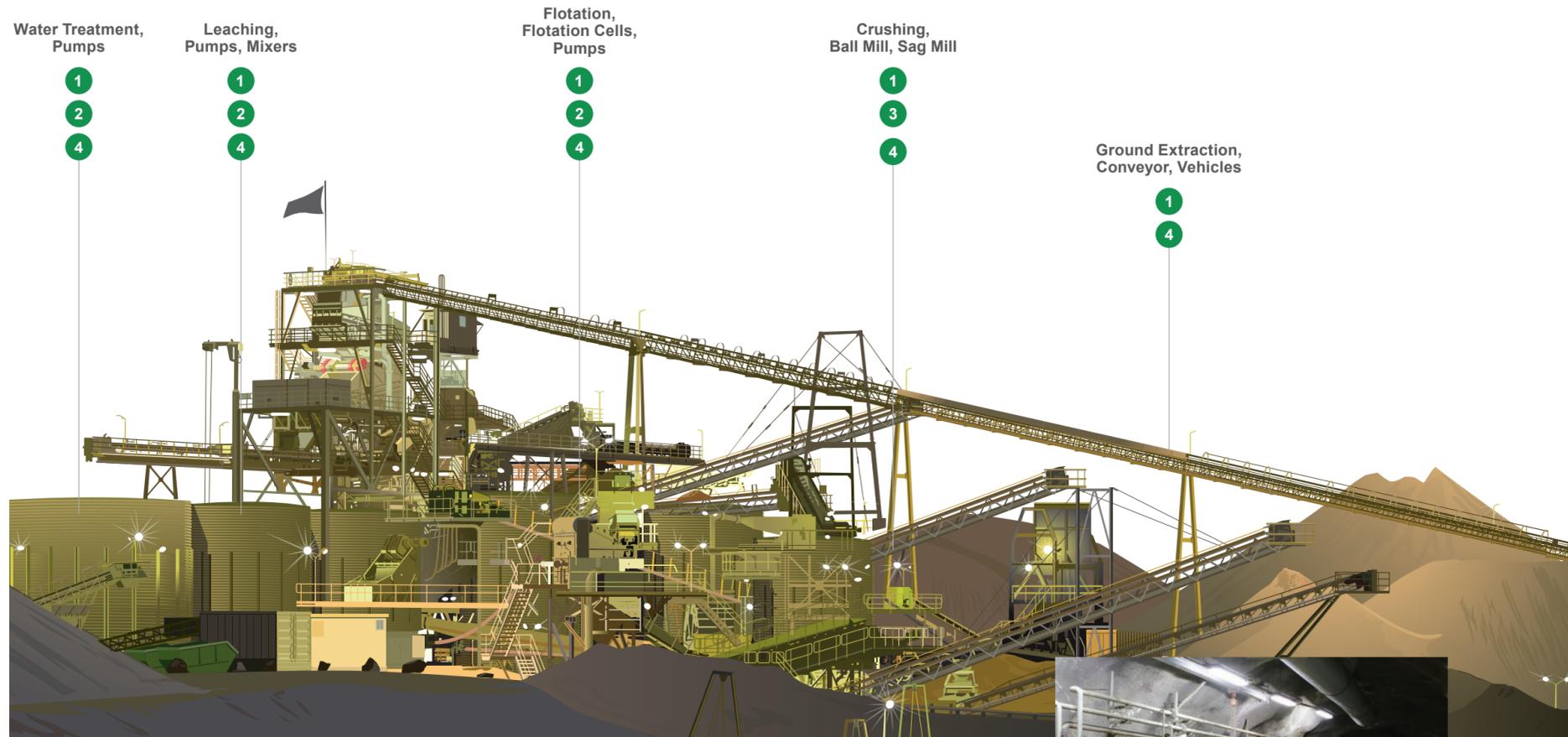


Choose the motor that delivers peak performance in extreme conditions such as high altitude mining.

Since 1990, U.S. MOTORS brand products have been used extensively for all types of mining applications in the high elevation mines of Peru and Chile. Engineered to exceed the industry's most stringent standards, our motors are the choice for durability and energy saving performance.

If you have questions, e-mail us at FacilityMRO@nidec-motor.com

We make it EASY for you to find and purchase U.S. MOTORS® brand replacement motors!



The U.S. MOTORS® brand NEMA Premium® line of high performance commercial and industrial motors is designed to help industry reduce energy consumption and comply with EISA regulations. This line features upgraded Open Drip-Proof and Totally Enclosed motors that meet or exceed NEMA Premium® requirements.



Underground Water Treatment Center

Product Overview

1 World Motor® CORRO-DUTY® Motors

Designed for severe environments such as mining and aggregate. The added features of the CORRO-DUTY motor provide an even greater array of features to help protect and extend the life of the motor.

CORRO-DUTY electric motors are all cast iron — frame, end shield, fan cover, and oversized conduit box — to help protect from rock chips and damage. The corrosion-resistant mill and chemical duty paint help protect the motor exterior from rust and corrosion. The shaft slinger on the pulley helps protect the internal components from dust. The stainless steel nameplate and zinc-plated hardware protect against rust. The precision balance helps reduce vibration. CORRO-DUTY motors meet NEMA Premium®+ efficiency standards allowing for greater performance and help in saving energy costs.

- 1 – 300 HP
- 230/460, 460, and 575 Volts
- 2, 4, 6 Poles
- Footed, C-Face Footed, and D-Face options available
- All Cast Iron Construction
- NEMA or IEC configurations
- Precision Balance (0.08IPS peak vibration maximum)
- Corrosion Resistant Mill & Chemical Duty Paint
- Conduit boxes larger than NEMA standard, diagonally split and rotatable
- Class F Insulation, Class B at 1.0 SF, Class F rise at 1.15 SF
- Cast Iron Bearing Caps

NEMA Premium



2 Vertical Solid Shaft Motors

More than 100 years of vertical motor design experience ensures U.S. MOTORS® brand p-base motors satisfy the requirements for water/wastewater treatment applications in the mining industry. These motors are constructed of high-quality materials and are manufactured in a state-of-the-art, ISO 9000-2000 facility.

- Premium, Energy & Standard Efficiencies
- 1 – 5000 HP
- WPI, WPII, TEFC and Hazardous Location Enclosures
- Severe Duty
- 400 – 3600 RPM
- 145 – 9608 Frame
- Designed for High, Medium or Normal Thrust
- Available in Vertical HOLLOSHAFT® and Vertical Solid Shaft



3 Crusher Duty Motors

Rugged motors designed to withstand harsh environments. The premium efficient and cast-iron construction is ideal for constant torque or variable torque applications typically found in the mining industry.

- Premium Efficient Design
- 1.15 Service Factor
- IP55 Rating
- Class F Insulation, Class B Rise
- Bi-Directional Rotation
- Re-Greaseable Bearings
- Thermal Protection
- 40 Degree C
- Auto Grease Discharge Fitting
- Designed For 3300ft Elevation
- Vertical Jacking Provisions
- All Cast-Iron Construction (Frame End Shield, Conduit Box)
- 20:1 Variable Torque; 3:1 Constant Torque (350 HP And Above)
- F1 & F2 Convertible Except For 449j & 5800 Frame
- High Strength 4140 Carbon Steel Shaft
- Inpro Seals
- Suitable for Inverter Use (Meets NEMA Mg-1 Part 31)
- Self-Certified Class II, Division 2, Groups E, F, & G with T3c
- Stainless Steel Nameplate
- Exceeds NEMA Design C Torques



forecyte
POWERED BY Nidec



4 FORECYTE™

Save time & money by incorporating FORECYTE, an asset condition monitoring platform, into your equipment. By using FORECYTE sensors on your rotating equipment like motors, pumps, and compressors, you can begin measuring your device's health by analyzing vibrations and temperature points to determine if maintenance or repairs need to be done. This minimizes unexpected equipment failure, reduces operating costs, and extends service life.

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²For details, refer to: www.usmotors.com

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