A Road Map to Reliability

How a Premier Silica Operation Uses a Baldor Installed Base Evaluation to Improve Plant Performance
Baldor now offers the most complete line of large AC motors in the world. Baldor • Reliance® motors deliver ratings to 1,500 Hp from stock and custom motors available to 15,000 Hp, alongside ABB induction and synchronous motors up to 100,000 Hp. Every large AC motor is designed and built for superior reliability, energy savings and rugged performance.

Plus, our large AC motor line includes both NEMA and IEC configurations assuring you the motor you need meets frame, enclosure and duty cycle standards for any application... anywhere in the world. One source for all your global motor needs. Only from Baldor and ABB.

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**NEW BALDOR TOWABLE GENERATORS AVAILABLE**

Baldor’s Towable Generator product family boasts current EPA emissions-compliant Kubota engines. There are three units at single phase 240/120 volt ratings from 10kVA to 20kVA. The three-phase capable TG25 will provide 208/120 and 480/277 volt power ratings of 25kVA/20kW, as well as 240/120 volt single phase 18kVA/18kW power ratings. Baldor also offers a Light Tower model with power ratings of 8kVA/8kW at 240/120 volt.

All models have a common state-of-the-art digital controller for easy operation and side mounted receptacles with a weather resistant cover for easy connection of on-site equipment. All units are designed with a removable tongue for extra security at the jobsite.

Accessories include a light mast kit, an electric winch kit and a spare tire kit.

**Baldor MST Digital Soft Starter Ensures Trouble-Free Operation**

Baldor’s MST Soft Starter, with six SCR three-phase voltage control, offers advanced protection for the motor, the soft starter and the load, ensuring trouble-free operation. Available from 7.5 to 1,000 horsepower at 208 to 575 Volts Alternating Current (VAC), this product is suitable for a wide variety of applications including pumps, compressors, fans, conveyors, mixers and stirrers.

The product features programmable torque control, providing a more linear acceleration during start that reduces wear and tear, and during stop, virtually eliminates pump water hammer. This torque control function was developed and tested in collaboration with pump manufacturers to ensure the best possible stop without water hammer and pressure surges. The product also offers integrated advanced motor protection with current sensing, programmable signal relays, programmable analog output and a built-in keypad interface.

MST Digital Soft Starters are available in two styles, an open starter or an enclosed combination starter. The open starter has a smaller footprint that makes mounting easy, and is loaded with high-end features that improve performance and save energy. The enclosed combination starter combines over current protection and overload protection in a single package.

**BaldorVIP Mobile App Now Available**

A new app available for the iPhone allows BaldorVIP (Valued Internet Partner) users easy access to many of the features offered on the desktop version. BaldorVIP, a free online tool available to Baldor customers, is designed to make conducting business with Baldor simple, efficient and hassle-free.

BaldorVIP Mobile delivers real-time technical product information, including nameplate data, performance ratings, layout drawing and connection diagrams, and replacement parts lists and accessories. Product pricing and availability are also available by searching product number or part number.

For more information, or to sign up for BaldorVIP, please contact your local Baldor District Office.
**NEW VERSATILE AND EASY-TO-USE BALDOR AC DRIVES AND DRIVE SELECTOR**

New Baldor ACB drives, based on ABB technology and innovation, feature easy-to-use, plain language interfaces and control routines to support UL Type 1 and Type 12 applications at 230V, 460V and 600V. Ranging from fractional to 550 horsepower stock ratings, these drives address a wide variety of industrial applications and support most industrial communication networks.

The ACB330 is a general purpose AC Microdrive that is compact, cost-effective and provides powerful control functions while maintaining a user-friendly operator interface. It is heavy-duty rated up to 30HP and can handle variable torque, constant torque or constant horsepower applications. The ACB330 is designed for new or replacement applications and features Volts per Hertz or Sensorless Vector Control with peak overload capacity of 150% (1 minute) and PID capability. An IP20 enclosure is standard, and a UL Type 1 option kit is available.

The ACB530, a general purpose AC Drive, is a versatile drive designed to handle complex sensorless vector applications in an easy-to-configure product. It is both normal-duty and heavy-duty rated with ratings up to 550HP. The ACB530 supports variable torque, constant torque or constant horsepower applications and is available in 230V, 460V and 600V versions. The ACB530 AC Drive controls motor speed with the precision and responsiveness needed in most applications where open-loop vector control is desirable.

To make drive selection easier, Baldor offers a variable frequency drive selector app that will choose the appropriate Baldor ACB or VS1 drive for your application. This convenient tool simplifies the process of choosing either a replacement drive or adding a drive to an existing process based on full load amps and line voltage.

**BALDOR INTRODUCES NEW SUPER WHITE WASHDOWN DUTY MOTOR**

Baldor’s new Super White Washdown Duty motor is designed for humid and moist environments in the food and beverage industry where motors receive sanitary washdowns on a regular basis.

The autophoretic® autodeposition exterior surface preparation method makes the white epoxy finish coat of this motor five times more resistant to corrosion and chipping than previous methods. The shaft, hardware and nameplate are all 300 series stainless steel, to prevent rust and corrosion.

This new line of motors also includes labyrinth seals on each end of the motor, enhanced sealing around the lead exit, same size bearings on each end, and a moisture resistant insulation system. Neoprene rubber gaskets on the conduit box ensure a tight, waterproof seal.

A maintenance-friendly drain design, with four easy-to-remove condensation drain plugs, allows thorough drainage regardless of the motor’s mounting position. The distinctive black color of the drain plugs makes them easy to recognize, and their shape makes them easy to remove. A notched fan cover allows easy access to condensate drain plugs without removing the fan cover. Baldor Super White Washdown Duty motors are NEMA® Premium efficient and are available from 1 to 20 HP, 56C through 256TC.
**Baldor’s New Dodge® MAXUM® XTR Concentric Reducer**  
**Designed for Maximum Reliability**

Packaged in a rugged ductile iron housing. The reducer features a superior sealing system, long-life bearings and is interchangeable with industry-preferred dimensions.

The MAXUM XTR offers more torque rating per case size versus any other concentric reducer on the market. The high precision carburized and ground gearing meets AGMA Q11 Quality standards, as well as the AGMA 2301 cleanliness specification.

The reducer features a standard premium tandem seal system with HNBR oil seals protected by an excluder lip auxiliary seal on all shafts. These seals provide high-temperature protection and minimize shaft wear, while providing twice the security to prevent ingress of contaminants.

Longer life tapered and/or spherical roller bearings, designed to meet or exceed AGMA standards, are used throughout the reducer. These bearings provide a minimum unadjusted L-10 life of over twice that of any other competitor.

MAXUM XTR concentric reducers are available in nine case sizes, with torque ratings from 29,500 inch/lbs. to 579,000 inch/lbs. torque. Reducer accessories include internal high capacity backstops, shaft driven fans, scoop motor bracket package, or top motor mounts.

**Baldor’s Dodge® Motorized Torque-Arm II® Gear Reducer**  
**Now Available in More Sizes**

Baldor now offers Dodge shaft-mount, right-angle beltless Motorized Torque-Arm (MTA) reducers in a full range of seven sizes from 3 to 100 HP and torque ratings up to 130,000 inch/lbs. This reducer mounts in multiple positions and is ideal for areas where standard belt driven reducers will not fit.

The MTA reducer features the patented Dodge twin tapered bushing system that not only makes installation and removal easy but also provides a sturdy, concentric grip of the driven shaft on both sides of the reducer. This eliminates the wobble and fretting corrosion associated with straight bore and single bushed reducers. Available in full length and short shaft systems, both guarantee maximum torque transmission.

Engineered to perform in harsh conditions, the MTA has a patented premium sealing system with excluder seal technology for extra protection against contaminants and has a -40 F to +300 F temperature range. The reducer has an American Gear Manufacturers Association rated design, with all tapered roller bearings, offering twice the bearing design life versus competitors’ units. The product is available as a C-face reducer or a C-face gearmotor assembly.
**Full Line of Baldor•Dodge® ER-Style Ball Bearings Available**

Baldor is pleased to introduce a new and versatile line of Dodge ER-style ball bearings available in two shaft attachment methods. The set screw version has a 65 degree set screw angle for maximum shaft grip. The D-Lok™ product offers a clamp collar grip for maximum concentricity to minimize vibration.

These high-quality, Dodge-manufactured products employ snap-ring retention to securely fit the cylindrical outer diameter into user equipment. The bearings also feature the Dodge ProGuard™ seal and flinger package to prevent contamination and maximize product life in dirty applications.

Baldor•Dodge ER-style ball bearings are suitable for a wide variety of industries and applications, including material and unit handling, conveying equipment, and agricultural, paper, packaging and printing machinery. The set screw offering ranges from 3/4” bore size (204 series) to 3-7/16” (218 series). The D-Lok style is offered in 3/4” bore size (204 series) to 2-7/16” bore size (212 series).

Modifications to the seal package are available on request, including the premium triple-lip seal design, premium MaxLife™ cage design for lubrication retention, low-drag labyrinth seals and a high-temperature synthetic grease offering.

**Baldor Introduces New Dodge® D-Lag Conveyor Pulley**

By increasing lagging life, Baldor's Dodge D-LAG conveyor pulleys will extend the operating life of both the conveyor pulley and conveyor belt. The lagging is 100 percent vulcanized for pulley bonding and strength, making it resistant to cuts and gouges.

Two pulley styles are available from stock for next-day delivery; D-LAG heavy-duty drum pulleys from 10” to 24” diameter, and D-LAG MDX® (mine duty extra) drum pulleys from 12” up to 24” diameter. Baldor's Dodge heavy-duty pulleys are designed with flexible end discs to eliminate weld fatigue under cyclical loads, while Dodge MDX pulleys feature an integral hub design that eliminates the welded hub.

**Baldor's Dodge® Type EXL Bearing Wins Gold**

Baldor's Dodge Type EXL mounted tapered roller bearing is a gold award winner in Plant Engineering magazine's 2012 Product of the Year awards competition.

The Type EXL provides both misalignment and expansion capability incorporated into a split, ductile iron housing with industry-standard Type E mounting dimensions. The bearing also features the new XTS triple lip sealing system, which is two times more effective than any other mounted bearing seal in the market today.

The Product of the Year Award was established to honor the most innovative and useful products introduced to the industrial plant engineering market. The Type EXL bearing was selected as a finalist by a panel of plant engineers, and then the magazine turned it over to the readers to determine the best of the best.
Turning Geothermal Energy into POWER
Innovative Use of Technology Leads to Higher Efficiencies with Less Maintenance

Geothermal energy is considered a clean, green, renewable source of power. The challenge is how to economically capture the heat from the earth and turn it into electricity. One company has found a way to improve the margins by adopting innovative technology to help achieve higher efficiencies, reduce maintenance costs and improve the reliability of 30, 100 HP condenser fans at its geothermal power plant in the Oregon desert.
U.S. Geothermal began commercial operation of the Neal Hot Springs 22 MW facility in November 2012. With 30, 100 HP condenser fans, this is the company's newest and largest plant.

U.S. Geothermal Inc. is a leading renewable energy company focused on the development, production and sale of electricity from geothermal energy. The Boise-based company began commercial operation of its newest and largest plant, the Neal Hot Springs 22 MW facility near Vale, Oregon, in November 2012.

Most of the thermal energy that enters the plant has to be removed as waste heat in the cooling system, in this case through an air-cooled heat exchanger. Thermodynamic laws dictate that the cooler the heat source the less energy can be converted to electricity. Therefore, it also means that the heat rejection equipment, as a percentage of overall plant construction, becomes more expensive for geothermal power plants like Neal Hot Springs because the geothermal resource is cooler than the geothermal industry average and is much cooler than the combustion temperature in a coal- or gas-fired power plant.

For example, a 22 MW geothermal plant requires the same size cooling tower as a 50 MW natural gas steam plant. U.S. Geothermal VP of Project Development Kevin Kitz says this is why reducing operation and maintenance costs of the heat rejection system are critical to the economic success of low-temperature geothermal plants like Neal Hot Springs. When Kitz learned about Baldor’s direct drive cooling tower motor, which replaces the traditional and maintenance-prone gearbox configuration typically used in cooling towers, he believed he found the right product.

“Efficiency, low cost of ownership and promised reliability drove our decision to use Baldor motors.”

Kevin Kitz, vice president of project development, U.S. Geothermal

“It was very interested in using this motor from the minute that I first heard about it,” says Kitz. “The advantages were crystal clear to me. It’s a very efficient motor that uses a variable frequency drive (VFD) to reduce parasitic losses to improve profit margins. It also has very low maintenance costs, and a five-year warranty that says Baldor puts its money where its mouth is on reliability.”
The motor is unique because it combines the technologies of Baldor’s laminated finned frame RPM AC motor with a high-performance permanent magnet (PM) rotor design, creating a high torque, direct drive motor specifically designed for cooling tower applications.

The laminated finned frame construction provides a highly efficient, power-dense package that replaces the right angle gearbox and jack shaft installation found in conventional cooling towers. The fan couples directly to the motor shaft and is controlled by Baldor’s VS1 cooling tower drive for optimal variable speed performance.

Not only was U.S. Geothermal the first company in the geothermal industry to adopt Baldor’s cooling tower motor solution for air-cooled condensers, it was also the first in any industry to apply the 5800 size motor in such a large scale project. The air-cooled condensers at Neal Hot Springs are also innovative for the large diameter induced draft fans on the horizontal air heat exchanger bundles. Kitz says the big fans offer a huge advantage in terms of performance, and the Baldor motors supplement those advantages.

U.S. Geothermal was the first company in the geothermal industry to adopt Baldor’s cooling tower motor solution for air-cooled condensers. Kevin Kitz, the company’s VP of project development, says the advantages of using the Baldor solution are crystal clear, calling it a very efficient motor with very low maintenance costs.
“In other industries, the heat rejection system is the tail of the dog,” says Kitz. “But in geothermal power plants, heat rejection IS the dog. It represents as much as one third of the total cost of the installed power plant equipment. Consequently, even small improvements go a long way, and we feel we have achieved a big improvement.”

Ian Spanswick, product director with TAS Energy, was the power plant project developer for Neal Hot Springs, and responsible for the technology of the power plant. He says TAS recognized the potential of using the cooling tower motor while brainstorming with the U.S. Geothermal team, and it was through the team’s interest that TAS really started exploring it as an option. It was a novel idea to use cooling tower motors with air-cooled condensers. Spanswick says while his company strives to find new and better ways of doing things, progress like this wouldn’t have been possible unless the customer was also pushing to do more.
Designed specifically for the cooling tower industry, Baldor’s VS1 cooling tower drives provide optimal variable speed performance for reduced energy consumption.

“We were able to work hand-in-hand with U.S. Geothermal to improve the project,” says Spanswick. “Working like this with a receptive and creative customer is a working relationship that is very unique. I’ve rarely come across it, and I think that’s what made this successful and helped to move the industry forward.”

Kitz says it’s typical of his company to investigate and closely scrutinize new technology – seeking engineered solutions that will help them improve processes and control costs. And he believes that the key benefits of adopting the new cooling tower motor technology remain clear.

“Efficiency, low cost of ownership and promised reliability drove our decision to use Baldor motors in these dry cooling, air-cooled condensers,” says Kitz. “This motor was the right product at the right time.”

Realizing the benefits that can be achieved with this unique solution, U.S. Geothermal also installed large-diameter fans and Baldor cooling tower motors at its San Emidio plant in Nevada. The advantages of this arrangement have also been noticed and adopted at other domestic geothermal power projects.

U.S. Geothermal also installed large-diameter fans and Baldor cooling tower motors at its San Emidio 9 net MW binary cycle power plant, located 100 miles northeast of Reno, Nevada.
Process Machinery Brings TOTAL COST OF OWNERSHIP APPROACH to the Design and Construction of a New Aggregate Plant
Process Machinery Brings
TOTAL COST OF OWNERSHIP APPROACH

OWNERSHIP APPROACH
When Process Machinery CEO, David Miles, learned that Bluegrass Materials wanted to upgrade a newly purchased quarry, he was excited about the opportunity. Not only would it be a great project, but it would also be a chance to work with the Baker family, the new owners and well-respected leaders in the aggregate industry.

Operating since the 1950s, the Bowling Green South Quarry still had 90 years of life left, but the plant was well past its prime and plagued by costly maintenance issues. Miles knew there would be a lot of competition for the job to design, fabricate and build the new plant, but he believed his team’s 34-year history and its focus on delivering the best total value would set it apart.

“We listened to their goals and tried to provide the best engineered project we could offer them,” says Miles. “They had a vision of what they wanted this plant to be, and we worked hard to give it to them. In the end, I think we brought the best solution to the table, and at a good value, and that’s why they decided to go with us.”

The quarry manager, Bill Bob Lindsey, says he was tickled when Process Machinery got the job because of its reputation for doing quality work. He had been waiting to get a new plant for the past 20 years and was excited to be a part of the team sharing ideas about what the new plant should look like. But what he couldn’t envision was how Process Machinery was going to design a system to deal with rock from four distinct ledges.

“The rock here presents some challenges,” says Lindsey. “We have scrubber stone that’s got to be kept separate; it can’t be mixed with any other material, so we needed a way to bypass the surge. This may sound simple, but it’s really very, very complicated. But they came up with a design that could do it.”

The end result is a Process Machinery design creating an extremely flexible and comprehensive blending system that allows the plant to make a full gamut of stone with a lot of blending combinations, as well as sand and lime products.

Fulfilling Bluegrass Materials’ request for long-term reliability and simplified maintenance was an easier task, according to Miles. Because, he says, they specified Baldor•Reliance® motors and Baldor•Dodge® gearing, bearings and pulleys.

“This is an efficient plant that’s built to last with products that offer reliability, durability and maintainability.”

Dave Miles, CEO, Process Machinery

Process Machinery designed and built an extremely flexible plant with a comprehensive blending system that allows the plant to make a full gamut of products. CEO David Miles says his company stuck tried and true to its values and principles when designing this new plant, and that meant specifying Baldor•Reliance and Baldor•Dodge products. By taking a total cost of ownership approach, Miles believes Bluegrass Materials has a plant that will run for a very long time.

“We stuck tried-and-true to our values and principles that we design all our plants around,” says Miles. “And that means we specify Baldor and Dodge products. This has been our specification for more than 30 years, and we have great comfort with it. Recommending these products was just one more way we brought value to this project.”

For the Bowling Green South Quarry project, Process Machinery selected Baldor’s Dodge Torque-Arm II™ gearboxes, Imperial and Type E bearings, Mine Duty Extra pulleys, and Baldor•Reliance Quarry Duty and Severe Duty motors. Miles says they based all of these selections on proven quality and reliability.

“I can’t deal with an inferior product, and I don’t want any issues. The products have to perform the way I’m
Considered the industry standard, Baldor’s Dodge Torque-Arm II shaft-mounted speed reducers were selected for the project because of the product’s proven performance and long-term reliability. The patented sealing system uses an HNBR oil seal protected by a metal excluder seal with rubbing lip, making this reducer a perfect fit for the harsh-duty industry.
Baldor•Reliance Quarry Duty and Severe Duty motors are used throughout the Bluegrass facility. With heavy-gauge steel and cast-iron construction, these motors are designed to deliver reliable, rugged performance. Quarry Duty motors are Design C with increased starting torque, ideal for starting loaded conveyors.

Baldor’s Dodge Imperial-E spherical roller bearings feature a patented locking system that provides a concentric grip to the shaft for superior holding, with Type E mounting dimensions. Proven Trident seals provide maximum sealing protection and are extremely effective for harsh and dirty environments.

told they will,” says Miles. “And that’s what I get from these Baldor•Reliance and Baldor•Dodge products. They work and work and work, and we don’t have to go back to a job site and replace them. We have come to rely and trust these products.”

Process Machinery also relies on Baldor’s System-1™ group, a team that facilitates the design, quotation and order processing of multiple products for project support. Craig Hartlage, project manager for Process Machinery, says he has partnered with the System-1 group for more than 15 years, calling it his one-stop spot to get everything he needs from Baldor.

“Not only do they provide us with a quote for all the electrical and mechanical components,” says Hartlage, “they also make sure the pulleys are preassembled with the correct bushings, shaft and bearings to our specifications. This is a real time-saver for us because all our team has to do is mount the assembled package. The time we save helps us to increase the throughput in our shop.”

Because Process Machinery builds in a “just-in-time” process, they also rely on the System-1 group to ensure that all of these packages and other components are delivered on time and in the right order. Hartlage says that being able to deliver a project more quickly helps set his company apart from other OEMs. And he says he relies on the System-1 group to perform.

“If we need components in a specific order, we tell them, and they work with us,” says Hartlage. “We have no hesitation going after these large
Baldor’s Dodge Mine Duty Extra Drum and wing pulleys feature the proven High Endurance (HE) integral one-piece end disc design that can handle loads up to four times higher than standard CEMA drum pulleys.

“Projects because the System-1 team understands what’s expected, and they work to meet our need. It’s a relationship that has worked for a lot of years.”

No one is more pleased with the way the plant turned out than Lindsey. He says his life is a whole lot easier these days with a plant that’s efficient and easy to maintain. He admits that it took him a while to get used to it but now enjoys coming up with a couple of little things every week to make the plant run even better.

“We got what we actually wanted,” says Lindsey. “We’re really happy with the plant. If I had to do this all over again, I would choose the same products, and I would lay it out the same way. I wouldn’t change a thing.”

That’s just the reaction that Miles likes to hear from a customer. He is also pleased with the way the plant turned out and proud that the Bakers trusted them to deliver an innovative design, constructed with high-end motor and mechanical components.

“We know we are not the cheapest in the industry,” says Miles. “But we like to think we offer the greatest value in the industry. This is an efficient plant that’s built to last with products that offer reliability, durability and maintainability. By taking the total cost of ownership approach, Bluegrass Materials has a plant that will be running for a very long time.”
HOW A PREMIER SILICA OPERATION USES A BALDOR INSTALLED BASE EVALUATION TO IMPROVE PLANT PERFORMANCE
Baldor’s Installed Base Evaluation team surveyed products at Premier Silica’s Brady operation quarry, two wet plants, three dry plants, two bagging facilities and two load out facilities. The team not only provided an accurate count of electrical and power transmission equipment but also captured detailed nameplate information, as well as the application and plant location. (All equipment was properly locked and tagged out, according to Premier Silica safety procedures during the survey.)
Because the Brady operation had been purchased and sold many times over several years, and by the time Premier Silica acquired the operation in April 2012, bills of material and other relevant historical product records were lost. Without knowing what products were installed at the facility, plant officials could not put a preventive maintenance or inventory strategy in place.

When Perry Finco began as the maintenance manager at Premier Silica’s Brady operation in spring 2012, he set a goal of bringing the 35-year-old facility up to 90 percent efficiency. However, because he and his team had to deal with constant unplanned downtime they didn’t have the time to get organized. Their task was made even more difficult because they had no idea what products were installed at the quarry, two wet plants, three dry plants, two bagging facilities and two load out facilities.

Over the years, the Brady operation had been purchased and sold many times, and bills of material and other relevant historical product records had been lost by the time Premier Silica acquired the operation in April 2012.

“How can you put a preventive maintenance or inventory strategy in place when you don’t know what products you have running in your plant?” says Finco. “We didn’t even know what products were stocked in our warehouse. Not having this information meant we were operating by the seat of our pants, chasing down parts trying to keep the plant running.”

While Finco knew where he wanted to end up, he understood that without knowing what products he had running in the plant and sitting on the shelf, he had no way to get there. But Finco did have experience with plant surveys at previous facilities, and when he found an Installed Base Evaluation (IBE) service offered by Baldor, he was very interested.

What Baldor offered Finco was a team to survey the electrical and mechanical products installed and inventoried at

“Baldor was willing to come in and take on the job, and the IBE team fit our needs perfectly.”

Perry Finco, maintenance manager, Premier Silica’s Brady operation
By getting the detailed information on all of the bearings running in the plant, the maintenance team was able to begin a preventive maintenance program using the correct grease and the correct lubrication schedule. The effort has had a tremendous impact on preventing the constant bearing failures that had been shutting down production. (All equipment was properly locked and tagged out, according to Premier Silica safety procedures during the survey.)

After detailed information is collected on-site by the IBE team, the data is analyzed and reported back to the customer. When the results of the IBE were presented to Plant Maintenance Manager Perry Finco, he immediately saw product standardization opportunities.

"Because of the fact that we are in such a remote area and a somewhat small project, I was worried about finding a firm to come in and conduct a survey," explains Finco. "But Baldor was willing to come in and take on the job, and the IBE team fit our needs perfectly."

After the on-site survey was finished, the Baldor team went to work analyzing the data and preparing a report. When the results of the IBE were presented, Finco immediately saw product standardization opportunities, a critical step in his strategy to manage inventory better.

"After we had reviewed all the details with our local Dodge® Field Sales Engineer Chris Teague, we made the decision to standardize on Baldor's Dodge Torque-Arm II™ gearing,” says Finco. “By choosing to use the same size gearbox on multiple pieces of equipment, we can reduce the number of gearboxes we keep in stock in our warehouse. We also believe converting to the new Dodge product will help improve our plant uptime."

With the survey data uploaded to the Brady operation’s CMMS system, the maintenance team has created its own database, which Finco says is now the framework for a preventive maintenance strategy for both mechanical and motor products across the entire Premier Silica operation.

“We’re using some of the information from the IBE report to write the scope for our new preventive maintenance program,” says Finco. “Now that we know what we have, we are outlining what’s needed for each product, setting up lubrication schedules, as well as..."
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other preventive procedures. And because we are now better organized with all the correct parts on hand, we are prepared to support planned maintenance shutdowns.”

The effort has already had a tremendous impact on preventing the constant bearing failures that had been shutting down production. Finco says by knowing exactly what kind of bearings were running in the plant, the team was able to upgrade product where necessary but also research the best way to maintain the bearings kept in service.

“What we found out is that we were using the wrong grease,” says Finco. “By conducting the right preventive maintenance with the correct grease and the correct lubrication schedule, bearings are no longer causing shut downs as they had in the past. And because we know what kind of bearings we have, we are also carrying the right quantity of bearings in the warehouse.”

With strategic plans in place and work well underway, Finco is happy to report that plant performance has improved tremendously since the time the IBE was conducted. He says his team has changed from being reactive to proactive and getting closer to the 90 percent efficiency goal. While there is still work to be done, Finco doesn’t hesitate to recognize that the Baldor IBE was the right tool to help his team move forward.

“This tool helped us refocus our energies to work on all the strategies that will bring this plant back to the reliability levels we know are possible,” says Finco. “The IBE was just the beginning of our journey. Now we have to stay committed and follow through. However, we could not have begun this work without this survey to get us started.”

Because an IBE provides a complete and detailed database of installed and spare components, plant officials can make informed choices that will impact reliability and the bottom line. At the Brady operation, the survey of inventoried parts in the warehouse supplied critical information for plant management to determine its inventory strategy moving forward.
Poised for MAJOR GROWTH
Chooses BALDOR as Its GLOBAL PARTNER

More than 70 years ago in rural Georgia, Lewis M. Carter developed the concept for the modern peanut sheller. Today, 100 percent of the U.S. peanut crop and a large percentage of the almond crop is processed by LMC equipment.
The company, still run by the Carter family, is now taking its proven technology and applying it into the growth markets of seed, grain, and other pulse crops like chickpeas, beans, and lentils. Currently 60 percent of LMC’s business is export, but with its rich heritage of innovation and a trusted global partner, LMC is prepared for major growth around the world.

L. Marcus Carter III is company vice president and the fourth generation to work at LMC. He says what makes the company unique is its systems approach: the capability to design, build, deliver, and install all of the equipment required to crack, hull, clean, size, and grade products directly from the field, preparing them as food ingredients. But the key to the company’s growth, according to Carter, is custom engineering.

“We take the time to listen to the customer to find out what they expect the machines to do,” says Carter. “We find ways to take their ideas and then build the machines to their specifications. We work hard to give the customer what they want, making sure they have what they need to efficiently clean and process their product.”

While the company was growing, the family determined several years ago that to prepare for major global growth, it needed to find one supplier that could meet all its needs, both in North America and around the world. One reason they chose Baldor, according to Carter, is that the family found a company that worked the same way it does and shares the same values.

“We both take the systems approach, which means we can rely on Baldor for the whole gamut of mechanical and electrical products we need,” says Carter. “Working with Baldor means we have one source for help, and we don’t have to go to eight or ten different people to get answers. Baldor supports us the way we support our customers, and that’s what makes us similar.”

LMC officials say they chose Baldor as their global partner because they can rely on them for the whole gamut of electrical and mechanical products. For example, this Baldor•Reliance® motor and Baldor•Dodge® Quantis® reducer package installed on an LMC aspirator, a piece of equipment that uses air flow to separate materials.
Carter also says product reliability was another selection factor and says they can count on Baldor motors, gearboxes and bearings to perform without fail. But it was Baldor’s global reach that helped LMC reach its final decision.

“It’s great that Baldor has support worldwide, especially as a member of the ABB Group,” says Carter. “It’s one more reason why we chose to partner with Baldor. We want to work with a company that can not only provide global products, but also offer us global support.”

It’s engineering support that is important to Chad Snellgrove, LMC’s R&D engineer. He is working on the next generation of equipment that will meet the demands that customers are making for machines that will move more product and move it faster. He not only appreciates the engineering advice but also likes working with a company that offers so many different types and styles of products, giving him a lot of design flexibility.

But what Snellgrove says he likes the best about working with Baldor is

“We want to work with a company that can not only provide global products but also offer us global support.”

L. Marcus Carter III, vice president, LMC Manufacturing
Today, 100 percent of the peanut crop in the U.S. is processed by LMC equipment, like this picking conveyor featuring Baldor’s Dodge Torque-Arm II™ reducer and Dodge bearings. Currently 60 percent of LMC’s business is export, but with proven technology and Baldor as its global partner, LMC is prepared for major growth around the world.

“Today, I would have to take the time to look up all the dimensions in a catalog and draw something myself. With Baldor, I can pull the CAD drawing I need from the website, whether it’s a gearbox, motor or bearing, and stick it in my drawing. I can’t stress to you enough how beneficial this is for us and what a time-saver this is.”

Mike Woodall, LMC’s production manager, has also had positive experiences working with Baldor engineers, most recently with the bearing team developing a new product to fill an LMC need. Woodall says from an operations standpoint, standardizing on one supplier has many obvious benefits, like simplifying the purchasing process and managing inventory. He believes it’s the relationships you build that make the greatest difference.

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Mike Woodall, production manager, LMC Manufacturing

“We don’t just look at Baldor as a product supplier; we have a good relationship that allows us to learn from one another.”

Mike Woodall, production manager, LMC Manufacturing

In today’s business climate of emerging nations, and with increased global demand for food, LMC is well-positioned to take its business to the next level. Carter says that he has no doubt that his company, with support from Baldor, will have an impact on feeding the world.
In addition to Baldor’s motors, gearing and bearing products, LMC has also standardized on Baldor’s mechanical power transmission component offering, including Baldor®Maska™ and Baldor®Dodge sheaves and bushings.

LMC engineers say they like working with a manufacturer that offers so many different types and styles of products, giving them design flexibility for both the North American and global markets. For this shelling machine, engineers selected Baldor®Reliance industrial IE2 motors, which meet or exceed the efficiency levels for electric motors introduced into European markets. The motor is being coupled to a Baldor®Dodge Quantis motorized shaft-mount (MSM) reducer, which meets global DIN standards.
Baldor's Dodge Quantis® Build Center Delivers
When States Industries needed Baldor’s Dodge Quantis ILH reducers in a hurry, the Reno Quantis Build Center delivered. Seven units, including these two, were built to customer specifications and were delivered within 48 hours, keeping the company’s machine build on track.
As a lead millwright for States Industries, a Western Oregon producer of premium hardwood panels, Chris Stevens is responsible for leading a maintenance shop team of mechanics and electricians that keeps the mill running. When the mill needs a new piece of equipment that can’t be purchased, it falls to this same team to design and build it.

The company wanted to replace the existing poly line, a process where blemishes in wood panels are filled, placed on a panel turner to dry, and then sanded. It was a time-consuming process because a forklift was required to move the panels from one step to the next. The maintenance shop team was asked to build a machine that tied the poly line, the panel turner and the sanding line into one continuous process.

The capital project was released in phases, and Stevens says the team was on target to meet the deadline when demand for the product increased, and the project was moved up. Based on years of experience with Baldor’s Dodge Quantis gearboxes used throughout the mill, Stevens knew he was going to install these gearboxes on the new machine, but he had been waiting on key information regarding the other equipment before placing the Quantis order.

“We couldn’t preorder the gearboxes because we had to wait until the sander was approved,” explained Stevens. “With that piece in place, we could then determine how many panels we could put through the machine and at what speed. As soon as all of this was figured out, I needed to get the project done. For me, it then became a mad rush to get all the Quantis units we needed.”

Stevens’ first call was to John Davisson, branch manager for Motion Industries in Eugene, Oregon. The two have a strong partnership and immediately got to work to determine the ratio, speed and design of the gearbox, configuring the right type and size unit to support the application.

“The first thing I did was get a hold of my local Dodge Field Sales Engineer Derrick Hoyle to find out...
what Baldor’s Dodge Quantis Build Center could do for this customer,” says Davisson. “I was aware of some of their capabilities, but I needed to know just how quickly they could build and ship these units.”

Davisson needn’t have been worried because the Reno Quantis Build Center is prepared to deliver in situations just like this. With a large inventory of components, trained technicians can build gearboxes with a wide variety of power ratings, ratios and shaft configurations. These capabilities meant that seven Quantis units were built and shipped within 48 hours of the order being placed. A turn-around time that impressed Stevens.

“We were able to design the gearboxes the way we wanted them and still received all of them so quickly.”

Chris Stevens, lead millwright, States Industries

“I really didn’t expect them to be delivered in this short time frame,” says Stevens. “So when the seven gearboxes showed up at my door within 48 hours, I was really surprised, and the first thing I did was call John to tell him the good news. We immediately began installing them, which was great because this meant we could keep our project moving forward.”
Lead Millwright Chris Stevens says he knows from experience that Dodge Quantis units are rugged and reliable. The proof, he says, is this Quantis ILH unit on a roll coater machine, one of the toughest applications in the mill. Despite the shock load and machine vibration, which has cracked the feet of other gearboxes, this Quantis reducer has performed without a problem for the past eight years.

States Industries LLC, founded in Eugene, Oregon in 1966, is a premier manufacturer of hardwood plywood and specialty panel products. Its primary manufacturing facility has the capacity to manufacture 300,000 panels per month and includes three multi-opening presses, two sanding lines, a sizing sander and the industry’s most comprehensive finishing lines.

What was even more impressive, according to Stevens, is that the gearboxes he ordered were not standard, off-the-shelf products, each of them was built to his exact specifications.

“We actually thought it would take a lot longer to get exactly what we wanted,” says Stevens, “but it didn’t. We were able to design the gearboxes the way we wanted them and still received all of them so quickly – that’s what I find amazing.”

The new equipment is up and running, and the gearboxes are performing just as Stevens knew they would. Based on experience, he expects them to provide years of trouble-free performance. Not only is Quantis a reliable product, Stevens says they are also his top choice because of the flexibility of the product.

“You can mount them in any location,” says Stevens, “up, down, left or right. We have units mounted upside down, and they work great. They all just keep running, and they are easy to maintain. I’m a firm believer in the product, and I would recommend them to anybody.”

He’s also a believer in the Reno Build Center and its ability to serve customers quickly. He says he already has plans to call on them again when he needs to replace older competitive units that are close to the end of their lives.

“John and I have already discussed what I need, and we know the team in Reno can build them,” says Stevens. “Now that I see how fast they can build and ship units, I don’t need to store inventory. I’m not afraid of waiting until I need one because I’m confident I can get one in 24 hours.”

States Industries LLC, founded in Eugene, Oregon in 1966, is a premier manufacturer of hardwood plywood and specialty panel products. Its primary manufacturing facility has the capacity to manufacture 300,000 panels per month and includes three multi-opening presses, two sanding lines, a sizing sander and the industry’s most comprehensive finishing lines.
Baldor’s Dodge® Quantis®
Build Center in Reno is Ready to Serve the West

Baldor’s Dodge Quantis is a modular-designed gearing solution, engineered for flexibility, greater torque density in a compact housing configuration and increased horsepower capability from ¼ to 75 HP.

The product, ideal for a wide range of applications, is manufactured in Belton, South Carolina. Now with the addition of Baldor’s Dodge Quantis Build Center in Reno, Nevada, customers in the western half of the United States have quick access to this popular product.

With a large inventory of preselected components, trained technicians can build gearboxes with an extensive variety of power ratings, ratios and shaft configurations.

To ensure top quality, each Quantis reducer is tested prior to shipping.

With a variety of units in stock, and the center’s flexibility to build to customer specifications, the Reno Quantis Build Center is ready to deliver customers in California, Washington, Oregon, Nevada, Arizona, Idaho, Utah, Montana, Wyoming, Colorado and New Mexico.

Input options include integral motors, clamp collar style, or 3-piece coupled. Output options include solid shaft, straight hollow bore and the exclusive Dodge Twin Tapered bushing system.

Baldor’s Dodge Quantis Build Center can ship product within 24 to 48 hours from receipt of order. The center’s Reno location makes it ideal to serve
Nothing is more frustrating than shutting down a machine, even an entire production line because of a bearing failure. Baldor • Dodge® bearings represent the best quality and reliability industry has to offer. From punishing mining applications to corrosive washdown environments, and everything in between, there’s a Baldor • Dodge bearing perfectly suited for the task at hand.

Keep your machinery healthy, strong and efficiently rolling along with the widest choice of industrial bearings in the world…only from Baldor • Dodge.

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