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PUMP engineer

COVER STORY:

NIDEC MOTOR CORPORATION:

A Key Driving Force Behind
Innovative Market Solutions

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Special Topic: Chemical Industry

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Nidec Motor Corporation:

A Key Driving Force Behind Innovative Market Solutions

With a history of innovation spanning more than 125 years, Nidec Motor Corporation has established itself as a leading manufacturer of commercial, industrial, and appliance motors and controls. The passion, enthusiasm, and tenacity that the company dedicates to each of its projects have been the driving forces of its successful endeavor to provide high performing and long-lasting systems. Since its origin, Nidec has pushed the boundaries of technology to develop new solutions for a wide range of applications.

Pump Engineer had the opportunity to speak with Director of Product Management, Tim Albers, Application Engineering Manager of General Industry and Integral Horsepower Pumping, Patrick Hogg, Director of Marketing for Industrial Pumping and Distribution, John Filla, Marketing Manager for Industrial Pumping, Mark Gaskill, and Marketing Communication Specialist, Maxwell Law, to discuss how the company's Commercial Industrial Motors and Drives division (CIMD) is able to continually integrate higher efficiency and technology into its products, and its long term service in the pump industry.

By Angelica Pajkovic



Employee wiring stator in Mena, AR plant.

Progressive History

Originally established under the name U.S. Electrical Manufacturing Company, Nidec Motor Corporation's flagship brand, U.S. MOTORS, has evolved, through a series of acquisitions, from a 17 person operation to an operation that employs more than 22,000 individuals worldwide. In 1962 Emerson Electric acquired U.S. MOTORS and in 2010, the company was subsequently acquired by the newly created Nidec Motor Corporation, a group company of Japan-based Nidec Corporation.

Headquartered in St. Louis, Missouri, USA, Nidec Motor Corporation is a global company that features a full range of high-efficiency motors, both large and small, which serve the industrial, residential and

commercial markets. It has manufacturing facilities in North and South America, Asia and Europe that design electric motors and drives for applications for the Agriculture, Industrial Equipment, Mining and Metals, Power Generation, Process Cooling Towers, and Water Treatment industries.

"What really sets Nidec apart," expressed Law, "is how all of its business units, including: CIMD (Commercial and Industrial Motors & Drives), Nidec Drives/Systems, Motion Control, and HVAC/R, work together for the common good of developing products and technologies that improve the lives of people today and in the future."

When Nidec Motor Corporation acquired its motors and controls business, it laid the foundation for a

full industry-leading motor solution portfolio. This portfolio included the amalgamation of the different brands, including: U.S. MOTORS, Leroy-Somer, Control Techniques, Kato Engineering, KB Electronics, and more, which provided the company with the opportunity to offer a large amount of equipment to many markets. Referencing the pump market specifically, Albers explained that, "Although our U.S. MOTORS brand provides a number of products for a diverse range of industries, it has grown up as a pump motor company, focusing on a lot of different pump applications. The brand has expanded significantly since 2010 and will continue to grow into the future."

"Whether it is refreshing an old system and incorporating IEC (International Electric Code) options, or designing new motors entirely, we will continue to bring new innovative motor solutions to the pump market."

Mark Gaskill, Marketing Manager for Industrial Pumping

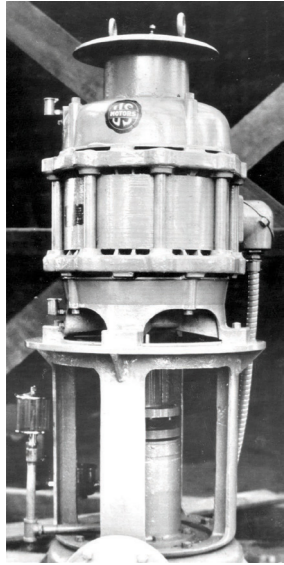
Achieving Worldwide Excellence

Aspiring to achieve continually higher growth, Nidec Motor Corporation's international presence has allowed it to enhance its technical capabilities in order to maintain a competitive edge and a leading role for the pump motor industry. With manufacturing facilities in the United States, Mexico, Italy, France, and China, the company is able to provide its global customers with fast and efficient service that exceeds their expectations.

What elevates Nidec Motor Corporation above other international manufacturers is the combination of its three hallmark principles, Passion, Enthusiasm and Tenacity, and its pledge to remain a leader in innovative technologies. Ingrained in each of Nidec Motor Corporation's employees is a passion to push the world forward by developing new motor and



Workers install new vertical motors in Denver, CO.



The first-ever vertical HOLLOSHAFT® motor for the pumping industry from 1922.



Newly introduced CORRO-DUTY® Vertical HOLLOSHAFT® Inverter Duty motor for pumping applications.

control technologies. “Nidec personnel are driven by their passion to create a quality product; it is never just a matter of getting the job done,” explained Albers. “The enthusiasm they carry with them as they approach each new project is fundamental to the advancement of both Nidec’s, and their own personal, capabilities,” he continued. “It is their tenacity to accomplish their goals which ultimately continues to move us forward as a company.”

“Nidec personnel are driven by their passion to create a quality product; it is never just a matter of getting the job done.”

Tim Albers, Director of Product Management

Comprehensive Service

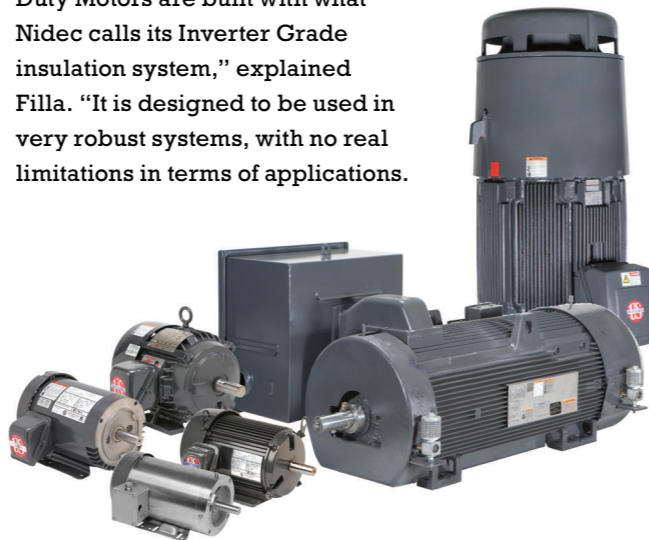
Another attribute that sets the company apart is its extensive and comprehensive customer service. “I really believe that the number one reason that people come to Nidec is due to the service they receive. Not just customer support, but the systems and technologies that we set up to meet their needs,” stated Albers. An example of one such service is Nidec Motor Corporation’s ‘engineered to order’ capability which provides its clients with a number of systems to ensure that the engineers at the pump companies are getting all the support they need to make informed decisions. The engineers will not only receive the performance

information about the product, but they will also know the product shipping details and will have the option of using Nidec’s FASTRACK program, which results in delivery of the desired product in four weeks or less. “In addition to these systems, we are enabled by all of the great in-house processes we have, as well as the excellent field services we provide,” added Filla. “With a very knowledgeable sales team and a dedicated after-sale technical support staff, Nidec’s clients have round-the-clock access to ask technical questions.

Nidec Motor Corporation has its engineering team involved with every step in the manufacturing processes for each product it constructs. “With systems changing to variable speed and with new technologies coming out, we want to ensure that we support customers and teach them about these new integrated products,” explained Hogg. “We want to supply the solution, not just the motor.” In order to deliver this solution, Nidec Motor Corporation makes sure to ask: How is this motor going to power your system? How will this motor fit into your system?, and What kind of application will your system be used in? “We provide the pump engineers with anything they need on the front end so that they can be sure that the motor will run efficiently and effectively in their systems,” continued Hogg. By gathering as much intel as possible Nidec Motor Corporation engineers are able to customize their solutions to match the needs of their clients. “What it comes down to,” said Albers, “is that we accomplish what we say we are going to accomplish and deliver a quality product.”

Innovative Products

Widely recognized for its vertical motor line, Nidec’s Inverter Duty Motors are also a popular solution in the pumping industry. “The Inverter Duty Motors are built with what Nidec calls its Inverter Grade insulation system,” explained Filla. “It is designed to be used in very robust systems, with no real limitations in terms of applications.



Nidec Motor Corporation offers electric motors for many applications.



Newly introduced ID300 integrated motor & drive system.

With thermostats, grounding rings, and insulated bearings, these motors are fully loaded and the ideal product for a majority of our pump clients.”

The integration of higher technologies and higher efficiency into its products, such as the Inverter Duty Motor, has allowed Nidec Motor Corporation to establish itself as a leader in the pump motor market. Over the last decade, the company has increased motor horsepower ranges. One of the most recent expansions is on Vertical TEFC motors from 700 horsepower to 2,000 horsepower. “We are going to continue to expand in the vertical and horizontal products and we are going to keep offering new features,” said Gaskill. “Whether it is refreshing an old system and incorporating IEC (International Electric Code) options, or designing new motors entirely, we will continue to bring new innovative motor solutions to the pump market.”

With the recent redesign of all of its TEFC cast iron horizontal products, Nidec Motor Corporation has also made its products more capable around the world. “We have gone from our ½ horsepower motors through to our 350 horsepower motors, and redesigned them all to create our World Motor product line that has a full IEC and NEMA product offerings,” highlighted Albers.

Progressive Future Standards

As Nidec Motors Corporation is focused on global expansion, it has made a point of ensuring that it has met all the necessary standards and certifications to be able to offer its products worldwide. During this new product development effort, Nidec has acquired certifications on products that few other companies

have. “One of our facilities is set up as an API monogram facility which allows us to utilize the API monogram,” mentioned Albers. “This is something only a couple of our competitors are able to do.” In addition to having specialized certifications, Nidec Motor Corporation is also certified by UL and CSA and has a number of voting members on many standards committees. “We are continually helping write new standards as we want to ensure that both Nidec, and the pump motor industry, are using the most relevant and up-to-date information for standards organizations such as the Hydraulic Institute, API, NEMA, or IEEE,” added Filla. “By being involved in numerous committees, we are able to ensure that we always incorporate the correct requirements to the appropriate applications. Through our involvement with standards committees, we help educate customers to accurately interpret and apply these standards.”

“I really believe that the number one reason that people come to Nidec is due to the service they receive. Not just customer support, but the systems and technologies that we set up to meet their needs.”

Tim Albers, Director of Product Management

Nidec is currently in the process of integrating new IIoT technologies that allow users to monitor the temperature, vibration, current, and voltage for pump motors.

“It is through all of our projects and efforts to grow integrated motors and variable speed drives for the pump market, that we see Nidec as one of the leaders into the future,” said Hogg.



Employee inspecting stators in Mena, AR plant.