

Enabling Productivity, Precision and Energy Efficiency



70+
years
experience



4 million
motors



10,000
servo solutions



20,000
gearless
machines
for elevators

Editor's Note

Welcome to this issue of VELOCITY in which I would like to give you a quick introduction to our Drives & Automation business vertical.

We began in the 1980s with drive controls and motors for the sugar industry; in 2007 we partnered with KEB of Germany, and a few years later began assembly and testing of drives under licence. KEB, headquartered in Barntrup in Germany's Ostwestfalen-Lippe area, is a technology company. Its label "**Automation with Drive**" reflects the shift to providing complete automation solutions. KEB's high performance drives and IPC based automation products cater to demanding machine automation applications worldwide. More than 10% of KEB's employees work in research and development.

Our portfolio includes servo drives and motors, special and general purpose VFDs, DC drives, and a range of control and automation products.

Presently our focus areas are machine automation solutions for the Plastics, Textile, Packaging, Crane, Machine Tools, and Metal industries. We also have important references in "Green" Test Bench solutions and Hydraulic Press.

Our plant at Airoli has an annual capacity of 5000 drives, and follows KEB's processes and quality norms.

How do we support our customers? KEB defines Drive as

motion, movement, dynamics, precision, stamina, continuity. To this we add application engineering and after-sales service. You can rely on our domain expertise to develop the right solution for your need, to execute it reliably, and - with our team of field engineers and 19 service centres - to provide prompt service support when you need it!

What does the future hold? Innovation, Industry 4.0 and Make in India are buzzwords nowadays; all three are ideas we try to make a reality. On the anvil for release this year are our PMSM SynchroTorq™ servo and direct drive machines. Together with KEB drives these will offer package solutions for many of our focus application areas to improve efficiency and productivity. We are also working on IIoT solutions to enable remote monitoring of production data as well as condition monitoring for predictive maintenance.

How can we add value for you? We leverage knowhow and expertise from across our Industrial Systems segment to understand the special challenges of your application; we offer you a complete solution using drives, motors, and automation products; we provide life-cycle support. Seamlessly, with a single point contact.

I hope that reading this has given you a better idea of what we do, and how we can work together. For more information, please get in touch with me on **bhadresh.dani@bharatbijlee.com**. And do visit the KEB website <https://www.keb.de/>

Bhadresh Dani
VP - Drives & Automation



Get Velocity in your inbox!

Subscribe to our newsletter here <https://www.bit.ly/2EcBohF> and receive it by e-mail as soon as it's published.

Bharat Bijlee is synonymous with electrical engineering in India. Our key business lines are Power Systems (Power Transformers, EPC Projects) and Industrial Systems (Motors, Drives & Automation, Magnet Technology Machines). Headquartered in Mumbai, we have sales and service network across India. The company's manufacturing facilities are located in Airoli, Navi Mumbai on a 1,70,000 sqm. campus.

Case Study

Whether or Not to Select Roller Bearings

Bearing noise makes up a significant proportion of customer complaints, and each instance must be investigated for its root cause. One such complaint we received was from a major customer who observed abnormal bearing noise and failure in several motors supplied by us.

The customer had specified that the motors be fitted with roller bearings (NU Type); they had also specified SPM nipples on the end-shields to monitor bearing condition.

Soon after the motors were installed, we began to receive complaints from the customer about noise from the bearings.

Upon investigation it became clear that most of the motors were being used in directly coupled condition. Roller bearings are suited for pulley-driven applications where radial loads are high. It is well documented by bearing manufacturers that roller bearings run smoothly only when subjected to a certain minimum radial load. This is because, without sufficient radial load, the rollers inside the bearing tend to slide rather than roll. This in turn causes bearing noise, rapid deterioration, and eventual failure of the bearing.

The minimum radial loads required for our motors were

calculated based on the bearing manufacturer's handbook and our own design details. These showed clearly that roller bearings were inappropriate for most of this customer's applications.

During discussions with the customer, the reason for their insisting on SPM nipples for monitoring bearing condition was understood. They had faced frequent bearing failures in the past, including in motors from other suppliers. To prevent this, and to avoid stoppages to their process plant, they had instituted a bi-monthly re-greasing schedule. During each re-greasing, they also took the SPM reading to assess bearing condition, and scheduled replacements during planned shutdown.

Clearly, wrong bearing selection had led to the high bearing failure rate and the costly preventive maintenance. The root cause was that roller bearings were not suitable for the application. When this was explained, the customer readily agreed to specify ball bearings wherever motors were directly coupled. Subsequently their problems all but vanished. The key learning was that when considering the use of roller bearings, it is essential to understand the application and type of coupling; this will lead to the correct choice of bearing type and size.

Product Showcase: Energy-Saving Servo Solutions for Plastic IMM







**10000+
Installations
and Growing!**



**Flow: 30 LPM to 450 LPM | Pressure: 120 Bar to 320 Bar
In Single Pump - Motor Configuration**

Key Features

-  Customised Package of **KEB** (Germany) Intelligent Servo Drive, Bharat Bijlee's Indigenously Developed PM Servo Motor, Internal Gear Pump & Accessories
-  Compact Design and Excellent Reliability
-  Energy Savings 30% - 60%
-  Globally over 3 lakh installations of **KEB** Drives in Plastic Machines

Highlights from Motors International Partner Conference 2019

Our Motors division organized an International Partner Conference for 60 of our top performing dealers in Langkawi, Malaysia.

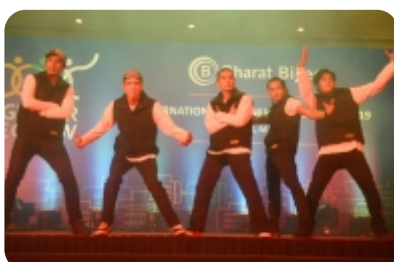
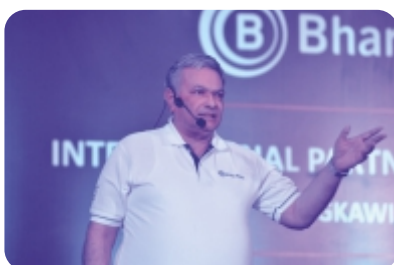
Dealers from across India flew into Kuala Lumpur on March 8th 2019 and were taken to Langkawi, an archipelago made up of 99 islands on Malaysia's west coast. They were hosted at the luxurious Meritus Mandarin Langkawi, a 5 star deluxe property. Surrounded by turquoise sea, paddy fields and jungle-clad hills, it was a perfect destination for us to share, listen and deliberate with our partners to achieve high growth together.

On the day of the conference, Sunil Mistry, VP - Motors, set the ball rolling with a motivational address. This was followed by presentations on various functions, including Sales & Marketing,

Production, Supply Chain and Design, by the respective department leads.

Top all-India and regional partner achievers, as well as emerging partners of last year, were felicitated; celebrations continued in the evening with a gala dinner that saw entertaining performances. Our top all-India dealer, Lejas Desai from Sunrise Marketing performed his own composition on stage in praise of Bharat Bijlee and his association with us.

There were ample opportunities for dealers and BB representatives to network through the three days of the conference. All in all, our dealer partners were charged up for the next FY 19-20.



BB in the News

Our Participation in IndiaPlast 2019



Here's our stunner booth at INDIAPLAST 2019 exhibition held at NOIDA in March 2019, which was inaugurated by Shirish Divgi, CEO of Milacron India Pvt Ltd. We displayed our energy-saving solutions for Plastic Machinery and Hydraulic Press and had a great turn-out. Our indigenously developed Servo motor was officially launched by Mr. Jigish Shah, VP (Technology & Product Development) and Mr. Gunjan Shah, AGM (Product Development) of Milacron.



Manufacturing Today India magazine featured 50 key manufacturing companies in their 8th anniversary issue and we're one of them! Our Aroon Fernandes speaks of how our ToC way of working helped tackle challenges faced by Gol's Quality Control order that prohibits manufacture, stock and sale of motors other than IE2 efficiency and higher. Turn to page 24 in the digital edition of the magazine: <https://www.bit.ly/2GxRgik>.



Here's one of the six good-looking 690V large motors that we despatched to a global Heavy Engineering company. The motors range from 250kW to 1000 kW and will be used for their conveyor application at a Coal Terminal in Karnataka.



We're glad to be featured in the most comprehensive directory of Textile Machinery in India, published after 2 decades by The Indian Textile Journal (ITJ). Flip over to page 36 of the online edition <https://www.bit.ly/2FLow9e> to read how our KEB drives meet the most demanding applications in Textile industry.