Velocity

Customer Newsletter for Industrial Systems

Bharat Bijlee

Customer Newsletter | Issue 2 | February 2019

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 quarter's issue of Velocity in which I would like to share with you recent developments in the Motors industry and in the Motors Division at Bharat Bijlee.

The year 2018 started off with the implementation of the Government of India's Quality Control Order banning the sale of motors of efficiency class below IE2. This led to a transitional period during which necessary certifications were obtained, and supply chains across the sector adjusted to the change. This in turn led to unfortunate delivery delays and elongated lead times. The industry as a whole has now largely normalised its supply chains; at BB we were able to bring on line our expanded capacity in Q3 2018, which enabled us to reduce backlogs significantly. We have simultaneously increased stocks across the country, and look forward to being able to deliver faster and more reliably going forward.

Six months ago we made a beginning in actively incorporating the voice of our customers in the way we work. Based on micro surveys of some customers, we have made internal changes that should significantly improve customer experience. As an example, our dealer portal is now much richer in both information and functionality. This is the start of a journey, and in the time to come we will listen carefully and strive to tailor our products and processes to deliver what customers really want.

Our Ultra-Premium Efficiency IE5 motor won the CII award for the Most Innovative Energy Saving Product for the year 2018, a proud moment for us. This is the second time in three years we have won this award; our IE4 motor won the same award in 2016. We will continue to invest in developing innovative new products that deliver value to customers and users.

With a comprehensive product portfolio that can satisfy most demanding applications, together with expanded capacity and increasing geographic coverage, we look forward to meeting the ever increasing and changing needs of our customers and partners.

We look forward to hearing from you and urge you to get in touch with me and my team for resolving issues, big and small, that may be specific to your organization. Please write to me on **sunil.mistry@bharatbijlee.com.**

Wish you a prosperous new financial year ahead!

Sunil Mistry
Vice President - Motors

Have You Got Your Copy Yet?

If not, please write to corp.comm@bharatbijlee.com

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 andservice network across India. The company's manufacturing facilities are located in Airoli, Navi Mumbai on a 1,93,000 sqm. campus.

MOTORS | TRANSFORMERS | PROJECTS | DRIVES & AUTOMATION | MAGNET TECHNOLOGY MACHINES

Case Study

Problems at site while achieving energy saving using Energy Efficient Induction Motors

IE2, IE3 and IE4 efficiency motors generally have full load speeds higher than standard IE1 or older design motors. For applications like blowers and pumps especially, the delivery at increased speeds is higher and sometimes results in higher input power. This has caused great concern with many users since sometimes the power consumption increases instead of reducing, especially if the earlier motors were relatively new and had good efficiencies.

To achieve the maximum energy saving for pumps and blowers, it is necessary to change the motor pulley sizes suitably so that the blower operates near the rated rpm.

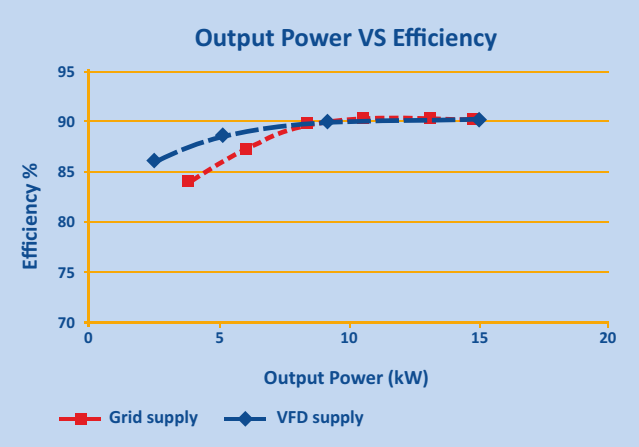
The motor pulley diameters should be reduced to D_new = D_old X RPM_old/RPM_new

In case of pumps that are directly coupled to the motors, trimming of the impellor (2-4% in diameter) is recommended in consultation with the pump manufacturers.

Either of the above two methods will result in the same discharge and also lower energy consumption after installation of new energy efficient motors.

In fans and pumps where less discharge is required, the normal practise is to throttle the output with dampers or to partially close the outlet valve. Higher energy savings can be achieved by reducing the speed of blowers/pumps using VFDs instead of throttling.

For a typical 15kW, 4 pole motor, the efficiency at various loads **when run on direct 415V 50Hz grid supply** and when run through VFD for a pump load is depicted alongside.



The nature of energy saving as shown above for such variable torque applications will be even higher, since the efficiency of the pump system also improves (as compared to throttling).

Conclusion:

Care is to be taken while selecting energy efficient motors with rated speed higher that the existing motor under replacement, especially for pumps and blowers. Motors when used with VFD for variable torque applications like pumps, blowers etc. result in even higher energy savings especially at lower speeds.

Note: The detailed paper was presented by Mr. Salil Kumar, Head of Design, Motors, Bharat Bijlee at the **3rd Interactive Workshop on Rotating Electrical Machines - Emerging Technologies on** April 26-27, 2018 at Central Board of Irrigation & Power (CBIP), New Delhi.

Product Showcase: SynchroTorq™

SynchroTorq™ is our latest range of high torque Permanent Magnet Technology machines for passenger elevators. They can also be used for direct drive applications.

- Higher efficiency
- Significant power saving
- No oil spillage and cleaning issues
- Powered by KEB Drive - SCL Technology without Encoder

For enquiries, please write to **mtmsales@bharatbijlee.com**

SynchroTorq™

High-Torque Direct-Drive Motors

Partner Spotlight

B. R. Parthasarthy
FourEss Corporation, Bangalore

When did you start FourEss Corporation? What was the impetus to start it?

Our firm M/s. FourEss Corporation was established on January 28th, 1993 in a small garage. This firm is managed by Mr. B. R. Parthasarthy and Mr. S. Gurumurthy who have successfully led the organization for 25 years.

What are the focus areas of your business?

We focus on end-users, OEMS, major panel builders and electrical contractors in and around Karnataka.

Can you tell us a bit about your market/industries you cater to?

We supply a range of products like Motors, Pumps, Gearboxes, Cables, Switchgears, Fans and also all types of electrical goods and accessories (named HOUSE OF ELECTRICAL GOODS).

We cover all types of industries such as Stone Crushing, Blower, Rice Mill Industries, Automobile industries, Crane manufacturers, Pharmaceuticals. We have experienced staff of about 20. The word FOURESS (4S) stands for - S - SUPREMELY, S - SATISFYING, S - SUPPLY, S - SOURCE.

Since when have you been associated with Bharat Bijlee? What have been some of the key highlights of this association?

We have been associated with BB since the inception of our firm. We have received some prestigious awards from BB through these years:

- 'All India Star Performance' award for the year 2005-2006
- 'Champion of Champions' for Southern Region for the year 2007-2008
- 'Ace Performer' award for Southern region for the year 2009-2010

Our organization has been No. 1 Channel Partner in Southern Region since inception.

What do you look forward to going ahead in your journey with Bharat Bijlee?

We want to continue in the same trend with BB, extending service to our esteemed customers by way of rendering prompt supply and services.

Himmat Bardia
Himmat Electric Co., Kolkata

When did you start Himmat Electric? What was the impetus to start it?

I was born in a small town in Rajasthan. My father was in service at Ahmedabad. I used to stay with my uncle at Kolkata. I did my primary education from my native place and graduation from Kolkata. I always intended to do business in core sector. I started supplying electrical industrial equipment to industries. My elder brother and uncle extended their full support in my business.

What are the focus areas of your business?

The focus areas of business are those which are not covered by BB or its other dealers to avoid competition. Kolkata being the business hub of eastern part of India, we take opportunity to promote the sale of Bharat Bijlee motors in neighbouring states like Assam, Bihar, Jharkhand and Odisha.

Can you tell us a bit about your market/industries you cater to?

We mainly deal in industries such as Packaging, Bottling, Iron & Steel, Tea, Pipe, Sponge Iron, Cement, Plastic and Food & Beverages.

Since when have you been associated with Bharat Bijlee? What have been some of the key highlights of this association?

We have been dealers of Bharat Bijlee since 2000. We are happy with the product quality, quick delivery and after-sales support from BB Kolkata office and overall BB organization.

Key highlight of our association has been that we have replaced competitor's motors with BB motors for all our customers, not on basis of price but by convincing them on BB quality and after-sales support.

What do you look forward to going ahead in your journey with Bharat Bijlee?

To be the number 1 motor dealer of Bharat Bijlee in Eastern Region.

Welcoming Drives & Automation Solution Partners

Abhishek Yadav
Core Mechanics, Pune

Ashit Shah
Asquare Solutions, Ahmedabad

BB in the News

Our innovative new Ultra Premium Efficiency IE5 Class motor, which was showcased at CII's Energy Efficiency Summit 2018, won the award for 'Most Innovative Energy Saving Product 2018' at their 19th National Awards for Excellence in Energy Management.

Our Magnet Technology Machines (MTM) plant has been certified as a 'Green Building' (Gold standard) by CII - Indian Green Building Council (IGBC). The plant that was inaugurated in April 2018 is designed to conserve energy and water and implements sustainable practices.

Our team at Toshiba Machine (Chennai) Pvt. Ltd. receiving an award for 'Strategic Vendor 2017-18.' A great milestone for our decade-long association with the company, counted amongst the leading Plastic IMM manufacturers in the country.

Our customer Terex India Private Limited recognized us for superlative quality and service standards in supplying LV motors. We received a memento, along with our partner Fouress Corporation, at their Vendor Meet 2018.

Godrej & Boyce Mfg. Co. Ltd. has recognized us as a 'Strategic Partner' at their Partner Meet 2018. Since 2012, we've executed various automation projects for the company with the aim of enhancing energy efficiency.

Our GreenStar and SynchroTorq™ range of permanent magnet gearless machines were on display at the Asia Elevator Escalator Expo held in Ahmedabad in October 2018.

Bharat Bijlee

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