

# AUTOMATION SOLUTIONS SIMPLIFIED



## Editor's Note

Welcome to the third issue of Velocity, our quarterly customer newsletter for the Drives and Automation segment.

At the recent United Nations Climate Change conference held in Paris, world leaders agreed to pursue efforts to limit global temperature increase well below 2° C. The new year, hence, brings with it a joint responsibility for all of us to save energy both at home and work. This edition of our newsletter pertinently focuses on an energy saving application for the plastic injection molding machine using servo solutions. 70-80% of injection molding machines are equipped with servo solutions, and there are retrofit options for old installations available as well. The plastic industry in India is poised for growth as our per capita plastic consumption is just 9 kg compared to world average of 25kg, and the plastic market has a CAGR of almost 12%.

We have also launched most awaited basic version of VFD BBVERT BL51 which can be bundled with our motors. This product is especially launched for our dealers, who can sell this VFD along with motor as a complete package. KEB launched servo drive COMBIVERT S6, which is a high-end servo specially designed for multi axis packaging machines, tool machines and textile machines.

We look forward to your feedback on how we can make this newsletter more relevant to you. Please write to us at [drivessales@bharatbijlee.com](mailto:drivessales@bharatbijlee.com).

Wish you a happy and prosperous new year!

**Bhadresh Dani**  
VP - Drives and Automation

## Automation Solution that delivers upto 50% Energy Savings for Plastic IMM

In India the cost of electricity is rising with every passing year due to high demand and supply constraints. Most of the industries are looking for measures to bring down the energy cost. Due to cheaper imports, plastic industry is facing tremendous pressure to remain competitive by bringing down energy cost and improving productivity and quality.

Typically the plastic industry uses four types of machinery, namely:

- Injection Moulding - 65%
- Blow Moulding - 7%
- Extrusion - 23%
- Thermoforming - 5%

Our partnership with KEB has helped us introduce unique a energy savings solution for plastic Injection & Blow Moulding machine, consisting of Intelligent Servo Drive that drives the PM Servo motor to operate the internal gear pump. This provides complete control of flow and pressure over the entire machine cycle and results in significant energy savings (from 20% to 50%). This also improves productivity and quality of the product.

To meet the timely delivery schedule of the customers, Bharat Bijlee has established in-house Servo drive test and assembly facility under license from KEB GmbH. All the Servo drives are fully tested on full load at elevated temperature. This ensures quality product and timely delivery.

Bharat Bijlee-KEB has also supplied Servo drive solutions for 4-axis All Electric IMM (Injection Moulding Machine) that is used for higher energy savings and in applications that need precision. Bharat Bijlee-KEB Servo drive can be interfaced with any kind of IMM controller using the latest communication protocols.

We have installed over 6000 Servo sets in last 7 years and have more than 20 satisfied OEM customers and hundreds of end-customers thereby maintaining leadership position. This is backed by strong sales and service network all over the country.

Bharat Bijlee is especially sensitive to provide strong after sales service as any breakdown in IMM can result in significant revenue loss to the end customer. To maintain uptime of the IMM, Bharat Bijlee is establishing regional service providers where critical repairs and service facility is available. A full-fledged service centre has been established at the factory to provide complete repairs of Servo motor and drives. On-site training is also provided to the customers in preventive maintenance and trouble shooting of the Servo drives.

Bharat Bijlee is fully geared to meet the challenges of the future to ensure customer delight.

Over 6000  
installations



## In the News

An article on our automation solutions for the plastic industry was featured in the October/November 2015 issue of Automation & Controls Today magazine.



To read the full article visit: <http://tinyurl.com/js7mbex>

In case of service support, customers can contact us on

+91 9167202402 / 022-27637290 or send an email to [driveservice@bharatbijlee.com](mailto:driveservice@bharatbijlee.com)

## Introducing COMBIVERT S6: A True Servo Drive



Bharat Bijlee-KEB have recently launched a new generation of True Servo Drives called S6. The COMBIVERT S6 Servo system adds a compact, flexible and powerful drive module to the KEB product portfolio for highly dynamic Servo applications.

### Benefits at a Glance

#### Powerful

- 0.75...5.5 kW in two enclosure sizes
- Book format for space-saving control cabinet configuration
- Direct connection to the mains for 230 V and 400-480 V grids
- High overload for excellent dynamics (250%/3 s, 200%/60 s)

#### Motor Operations

- Universal control for asynchronous, synchronous, IPM or synchronous reluctance motors
- Motor operation with encoder feedback or encoder-less ASCL/SCL for precise speed control

#### Real Time Ethernet Module

- EtherCAT, ProfiNET IRT, POWERLINK, CAN, Diagnostics RS232 / 485

### Where can S6 have advantages?

- Servo applications in power range up to 5.5kW
- High dynamic applications with high overload demand
- Applications with realtime Ethernet controls (EtherCAT, PROFINET, POWERLINK)
- Applications with use of ground fault circuit interruptors
- Applications with Safety Functionality

### Possible target applications

- Packaging machinery
- Tool machinery
- Spindles and woodworking machinery
- Textile machinery
- Lift applications
- Special applications like glass- or metal processing machinery

## Launch of new BBVERT BL51 AC Variable Frequency Drive

Bharat Bijlee has been manufacturing AC Electric Induction motors for over 70 years which are suitable for various applications across industries. Over the last many years there is growing demand for variable speed drives that can be used with the induction motors for machine automation and for energy savings. Further, customers desire a single source that can supply motors and drives as a package. To address this need, BBL has introduced new range of Superior Performance AC VFD – BBVERT BL51



### BBVERT BL51 Drives family

Simple to install | Easy to Operate |  
Complete package with our motors

These drives can be used for V/F control as well as in sensor-less vector control mode. They are compact, easy to install and simple to operate.

#### Some unique features of the BL51 drives are:

- Ambient Temperature 50°C
- Built-in BACNET Protocol for HVAC applications
- Conformal Coated Electronic Boards for Environmental Immunity
- Built in EMI Filter for Noise Suppression
- High Speed 32 Bit-100 MHz CPU for Fast Dynamic Response
- PTC Terminals for Motor Over Temperature Protection
- Control mode include V/F and Sensor Less Vector Control
- Built in Modbus, supports communication protocols like Profibus / Devicenet / Modbus / CANopen / Ethernet TCP / IP

The drives can be used for speed and torque control for various machineries like Cranes (CT/LT), Conveyors, Extruders, Mixers, Fans, Pumps in industries like Textile, Plastic and HVAC. Initially these will be available upto 15HP for 3 Phase Supply and upto 3HP for Single Phase Supply. With time the range will be expanded for higher ratings. The BL51 drives will be promoted through our dealer network of motors.

# Welcome to the DASP Community!

## Drives & Automation Solution Partners



Mr. Atul Patel

**M/S Aditya Industech**

They specialize in Textile segment in Surat



Mr. A. R. Shah

**M/S AR Enterprise**

They specialize in the Plastics and Textile segment in Ahmedabad



Mrs. M. Shah

**M/S Technosoft  
Consultancy & Services**

They specialize in Metal and Plastics segment in Kolkata

## Participation in Exhibitions

**Engimach 2015:** In December 2015, our Motors and Drives & Automation team together participated in ENGIMACH 2015 held at the Mahatma Mandir Convention & Exhibition Center in Gandhinagar over 5 days. Engimach is an international trade fair for machine tools and engineering, and is one of the largest fairs of its kind in India.

At the exhibition we showcased our automation solutions for various industries and also launched the BBVERT BL51 Compact Vector Control AC Drive, which is simple to install, easy to operate and can be sold as a complete package along with our motors. We got a tremendous response at the event, with many of our existing Motor dealers excited to see the new drive from Bharat Bijlee and keen to sell along with our motors.



**IndPlast 2015:** We participated in the IndPlast Exhibition in Kolkata in November 2015, along with our DASP M/S Technosoft Consultancy & Services. We showcased our energy saving Servo package for Plastic Injection Moulding Machine at the exhibition.



**SITRA 2015:** We participated in a one-day conference cum exhibition organized by the South Indian Textile Research Association (SITRA) as part of the celebrations for national energy conservation day. At the event, we showcased our energy efficient products Servo motor and drive, IE3/IE4 motor and the new BL51 product family.



## Customer Speak

We were recognized as the 'Best Supplier for Delivery' by Toshiba Machine (Chennai) Pvt. Ltd in their Vendor Meet last year.

TMIC is among the leading high-end plastics injection molding machines and auxiliary equipment manufacturers in India. TMIC is a wholly owned company of Toshiba Machine Company of Japan.




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