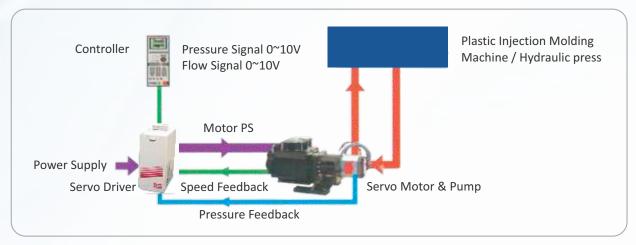


### **Single Pump Servo Control System**



# **Accuracy**

## 1. Position Repetition Accuracy:

Fast response guarantees the mold-closed/opening accuracy; accuracy of the end ejection position can reach to 0.1 mm. An Injection accuracy of 0.3% can be achieved with additional accuracy molds.

#### 2. Pressure Control Accuracy:

Highly accurate and responsive PID module guarantees a stable system pressure which is controlled within  $\pm 0.5$  bar, thus greatly improving the formation quality of products.

#### High Dynamic Fast Response; Low inertia Permanent Magnet Servo motors with various options :

- Protection Class IP64; IP65; IP67 etc.
- Ratings : 2.2kW/10Nm to 200kW/1000Nm.
- Mounting B3 or B35 with Rated speed from 1500 to 6000 RPM.
- Standard supply is fan cooled and optional is liquid cooled.
- Brake is optional.

We provide retrofitting for existing machines

World Class Service Center: A full fledged service center for repairs of KEB Drives and Servomotors



#### **AIROLI WORKS**

No. 2, MIDC, Thane-Belapur Road, Airoli, Navi- Mumbai – 400708. T: 022 27637200/7395 email: drivesales@bharatbijlee.com

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# COMPLETE ENERGY EFFICIENT SOLUTIONS

• Plastic Injection Molding Machines • Plastic Blow Molding Machines • Hydraulic Presses

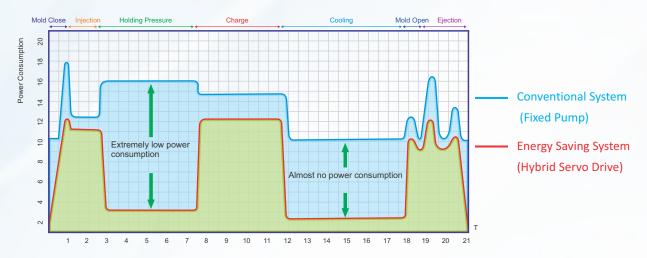




Complete Package of KEB (Germany) Servo Drive; Internal Gear Pump and Servo Motor

# **Energy Efficient Solutions From Bharat Bijlee**

**Energy Consumption Curve for Injection Molding Machine** 



#### **Energy Saving**

Compared with traditional constant/variable displacement pump systems, the servo pump system combines servo motor's fast stepless speed regulation and hydraulic pump's self pressure adjustment, bringing tremendous energy savings (20 % to 60% depending upon cycle time).

#### **Solutions Package**

For plastic - metal industry we now offer the following solutions:

- 1. KEB Germany Servo Drive
- 2. Servo Motors from reputed manufacturing company
- 3. Internal Gear Pump with low noise and high efficiency (150 bar to 350 bar)
- 4. Bell housing with coupling and antivibration pads (On Request).
- 5. Accessories like AC Choke, Brake Resistor, Power and Feedback Cable, KEB Display Panel, EMC Filters, Communication Module, touch screen HMI and PLC.





Servo Motors

Servo Drives











**AC Input Choke** 

Brake Resistor

Resolver/Encoder Feedback Cable

HMI

**EMC** Filter

Std Display Operator with Keypad

With expertise gained over 65 years in the design, manufacture and application of motors, Bharat Bijlee - in partnership with KEB of Germany - has expanded its portfolio with a comprehensive range of AC variable speed drives and servo drive systems.

Bharat Bijlee has a state-of-the-art plant (ISO 9001:2008) for Assembly and Load Testing of KEB (Germany) AC VFD / Servo Drives from 15kW to 900kW.

KEB drives are designed for applications that demand high performance and superior accuracy, speed and response time. KEB designs and manufactures its products at Barntrup, Germany, and caters to a variety of sophisticated and challenging applications.



The KEB F5 Drives cover ratings from 0.37kW through 900kW in different versions, with voltage options of 230V, 400V and 690V. KEB also designs and manufactures the high speed, multi-axis C5 and C6 motion controllers.

#### **Energy Savings in Hydraulic Press**

The complete package of Servo motor; Servo drive and gear pump with PLC & Touchscreen HMI retrofitted in existing or new Hydraulic press will result in significant energy savings ranging from 20% to 50%.

The stroke length can be easily adjusted for various positions by index profile in the intelligent servo drive. Great Flexibility is achieved as various flow and pressure settings are possible for various jobs. Throttling losses can be eliminated and hydraulic circuit is simplified as fewer components are used.

#### **Standard Features**

- Epoxy conformal coating on PCB for protection against corrosion, moisture and dust.
- Compact Design
- All drives are controlled by KEB's proprietary sensorless motor management algorithm
- 8 programmable parameter sets
- I<sup>2</sup>t and PTC motor protection
- Wide input operating voltage
- Ambient temperature 45 deg. C

# The wide input operating voltage band is ideally suited to Indian conditions

- 230V Class 180V to 260V
- 400V Class 305V to 500V
- 690V Class 600V to 760V

#### **Optional Plug-in Interface Feedback Cards**

- Increment/Absolute/Sine-cosine/Hiperface encoder
- Resolver

#### **Universal PC Software for all KEB Combivert F5 units**

The Drive parameters can easily be accessed using the combivis software that can be freely downloaded from the KEB website (www.keb.de).

The scope function on the laptop can be easily activated using the combivis software and the graph of all the Drive parameters can be viewed and recorded during commissioning of the Drive.

#### **Extensive Service Network**

Bharat Bijlee has a team of service engineers and authorized channel partners for providing after sales service for commissioning and servicing



# **Drive Networking**

KEB drives offer an extensive range of networking options.

- CANopen DeviceNet MODBUS INTERBUS SERCOS PROFIBUS
- ETHERNET ETHERCAT PROFINET

More than 4000 servo sets supplied to leading OEMs.