Be one step ahead of your competitor with Bias Multi Servo Press

New Generation Press Design with Flywheel assisted Servo Control Technology
Advantages of Multi Servo Press

Nowadays servo presses are replacing eccentric, knuckle and link drive presses in metal forming operation at many sectors, because of high ability and easily forming of complex parts, etc. A major obstacle to the spread of servo presses, high investment costs, low press speeds and limited pressing force is formed. Power of Bias Multi Servo press power comes from the flywheel to take a much lower servo motors for controlling ram movement, by the low investment cost, high press speeds, high pressing force and with low power consumption a truly eco-friendly new-generation press technology.

Multiple operation with one press

- Powerfull and skilled
- Various programmable slide motion
- High tonnage rating point
- High press speed
- Stepless variable stroke
- Stepped pressing (BDC change during pressing)
- High working energy
- Double action from top
- Unique press mechanism (Hybrid)
- Suitable complex and precise operation
- Suitable body structure for transfer system
Max. Performance
Bias Multi Servo press has higher tonnage rating point curve and high working energy than the classic presses. Because of high working energy and active double action features will help to combine several stations on the progressive and transfer die system can be reduced die size and cost

Stroke Rate Optimization
With this feature it is possible to achieve higher speeds at lower stroke. Adjustable stroke makes easy to set die bearing length by desired stroke which will help to reduced die cost

Increase Productivity
Being capable of change of the press stroke curve can increase production rate at progressive die and transfer system

Setup Time Optimization
Thanks to improved die memory system, stroke adjustment, press speed, motion type, adjustment slowdown height and slide adjustment value can be stored and minimized mold changeover times.

Increase Product Quality
With bottom dwell, double strike and stepped pressing operating modes, it is possible to overcome the difficulty of getting the form for pressing parts.

Reducing Wear in Die
With link motion and soft blanking operation modes it is possible to minimize the die wear. It also extends the life of the springs used into the die.

Increase in Energy Efficiency
Comparing with other servo presses, Bias Multi Servo press system doesn’t require high-cost capacitor boards etc. Due to the flywheel & servo motor combination with a special patented mechanism provides high level of energy efficiency.
Ram Motion Type

Ram motion types as shown in the following graphs will be pre-programmed. Stroke length and slow down height can be adjustable at link motion mode.

Stepped Pressing

Bias Multi Servo Press can work in similar way with forging press. In every cycle BDC can be changed dynamically and ram can reach to BDC step by step. Step heights and step number can be changed by programming for different operations.

Higher Tonnage Rating Point

Higher tonnage rating point (ha) can be obtained with Bias Multi Servo Press compared to conventional mechanical presses and servo presses. So Press can be used efficiently in deep drawing, forming, forging operations where parts are higher.

High Working Energy

Energy which is required for forming, cutting etc. is called working energy. Higher working energy means; pressing complex, deep, difficult parts can be achieved without press stopping. Bias Multi Servo press, thanks to its special press mechanism, has higher working energy than the other servo and classical presses.
Plunger Guide Bedding

Plunger guide system will help arising from the crank-connecting rod mechanism of side load to be transferred onto the press body before reaching the ram.
Plunger guide's advantages are as follows:
- Not deteriorated ram parallelism during the press.
- Suitable bearing system for off center loads.
- Increased slides life and reduce wearing

Loadcell

Hydraulic overload safety is not a system that protects your die, protects only your press. Electronic overload safety system measuring stretches on the press column (in micron level) when it is reached on desired tonnage (such as adjustable overload safety system) press stops and ram pulls back from the die. This will prevent damage that occurs.

Active Double Action

The cushions which the other presses have, are passive and uncontrollable. Bias Multi Servo Press has active double action option. In active double action, cushion position is adjustable and can be controlled according to operation requirement. Together with bottom cushion option, operations required three action like fine blanking can be done.

Soft Blanking

Cutting/Blanking operation can be done with minimum noise and die wear with Bias Multi Servo Press. At the same time, die life and precision can be increased by avoiding the vibrations and back forces occured on die and press.
## Standard

<table>
<thead>
<tr>
<th>Models</th>
<th>HS1-50</th>
<th>HS1-100</th>
<th>HS2-160</th>
<th>HS2-200</th>
<th>HS2-250</th>
<th>HS2-300</th>
<th>HS2-400</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tonnage</td>
<td>Tons</td>
<td>50</td>
<td>100</td>
<td>160</td>
<td>200</td>
<td>250</td>
<td>300</td>
</tr>
<tr>
<td>Tonnage rated point</td>
<td>mm</td>
<td>6</td>
<td>7</td>
<td>7</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Working energy</td>
<td>kJ</td>
<td>4 (35 spm)</td>
<td>9 (35 spm)</td>
<td>11 (30 spm)</td>
<td>17 (30 spm)</td>
<td>22 (30 spm)</td>
<td>35 (30 spm)</td>
</tr>
<tr>
<td>Stroke*</td>
<td>mm</td>
<td>30-100</td>
<td>30-120</td>
<td>40-140</td>
<td>50-170</td>
<td>50-170</td>
<td>60-180</td>
</tr>
<tr>
<td>Shut height***</td>
<td>mm</td>
<td>280</td>
<td>350</td>
<td>450</td>
<td>500</td>
<td>500</td>
<td>550</td>
</tr>
<tr>
<td>Slide height adjustment</td>
<td>mm</td>
<td>50</td>
<td>70</td>
<td>80</td>
<td>100</td>
<td>100</td>
<td>120</td>
</tr>
<tr>
<td>Bolster size</td>
<td>mmxmm</td>
<td>800x500</td>
<td>1000x600</td>
<td>1500x900</td>
<td>1600x1000</td>
<td>1600x1000</td>
<td>1700x1000</td>
</tr>
</tbody>
</table>

## Extended

<table>
<thead>
<tr>
<th>Models</th>
<th>HM2-100</th>
<th>HM2-160</th>
<th>HM2-200</th>
<th>HM2-250</th>
<th>HM2-300</th>
<th>HM2-400</th>
<th>HM2-500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tonnage</td>
<td>Tons</td>
<td>100</td>
<td>160</td>
<td>200</td>
<td>250</td>
<td>300</td>
<td>400</td>
</tr>
<tr>
<td>Tonnage rated point</td>
<td>mm</td>
<td>9</td>
<td>9</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>Working energy</td>
<td>kJ</td>
<td>10 (35 spm)</td>
<td>15 (35 spm)</td>
<td>20 (35 spm)</td>
<td>30 (35 spm)</td>
<td>41 (35 spm)</td>
<td>53 (35 spm)</td>
</tr>
<tr>
<td>Stroke*</td>
<td>mm</td>
<td>50-140</td>
<td>60-160</td>
<td>70-200</td>
<td>70-200</td>
<td>80-210</td>
<td>90-230</td>
</tr>
<tr>
<td>Speed **</td>
<td>spm</td>
<td>30-100</td>
<td>30-85</td>
<td>25-80</td>
<td>20-75</td>
<td>20-75</td>
<td>20-70</td>
</tr>
<tr>
<td>Shut height***</td>
<td>mm</td>
<td>350</td>
<td>500</td>
<td>550</td>
<td>550</td>
<td>600</td>
<td>600</td>
</tr>
<tr>
<td>Slide height adjustment</td>
<td>mm</td>
<td>70</td>
<td>80</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>120</td>
</tr>
<tr>
<td>Bolster size</td>
<td>mmxmm</td>
<td>1000x600</td>
<td>1500x900</td>
<td>1600x1000</td>
<td>1600x1000</td>
<td>1800x1100</td>
<td>2000x1100</td>
</tr>
</tbody>
</table>

## High Stroke

<table>
<thead>
<tr>
<th>Models</th>
<th>HL2-160</th>
<th>HL2-200</th>
<th>HL2-250</th>
<th>HL2-300</th>
<th>HL2-400</th>
<th>HL2-500</th>
<th>HL2-600</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tonnage</td>
<td>Tons</td>
<td>160</td>
<td>200</td>
<td>250</td>
<td>300</td>
<td>400</td>
<td>500</td>
</tr>
<tr>
<td>Tonnage rated point</td>
<td>mm</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Working energy</td>
<td>kJ</td>
<td>20 (30 spm)</td>
<td>24 (25 spm)</td>
<td>34 (25 spm)</td>
<td>44 (25 spm)</td>
<td>57 (25 spm)</td>
<td>67 (25 spm)</td>
</tr>
<tr>
<td>Stroke*</td>
<td>mm</td>
<td>100-320</td>
<td>100-320</td>
<td>120-360</td>
<td>120-360</td>
<td>120-360</td>
<td>140-400</td>
</tr>
<tr>
<td>Shut height***</td>
<td>mm</td>
<td>600</td>
<td>600</td>
<td>700</td>
<td>700</td>
<td>700</td>
<td>700</td>
</tr>
<tr>
<td>Slide height adjustment</td>
<td>mm</td>
<td>80</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>Bolster size</td>
<td>mmxmm</td>
<td>1600x1000</td>
<td>1700x1100</td>
<td>1800x1200</td>
<td>2000x1100</td>
<td>2200x1200</td>
<td>2400x1300</td>
</tr>
</tbody>
</table>

*Stepless adjustable stroke between specified range
**Maximum speed value changes between specified range according to stroke and kinematics
***Max. Closed die height
**Standard Specifications**

- H type body
- Stress relieved body
- Special alloy bronze bearings
- GGG cast iron gears
- Double crank, double connecting rod (except HS1)
- Programmable slide motion
- Automatic stepless adjustable stroke
- Stepped pressing (BDC change during pressing)
- Adjustable press speed
- Touchscreen monitor control panel
- Hydraulic overload
- Pneumatic clutch&brake
- Central recirculating oil lubrication
- Motorized adjustable slide height
- Photocell safety device
- Double hand control and foot pedal

**Optional Specifications**

- Double action from top
- Electronic load monitor
- Electronic adjustable overload safety system
- Bottom cushion/ejector
- Quick die change equipment
- Die library and automatic slide height adjustment
- Vibration pad
- Movable front and back mechanical cover

**Operator Panel**

- You can set the stroke on the panel without any mechanical adjustment
- You can adjust the press speed
- Motion profiles can be easily changed
- You can set slow down height at the link motion profile
- You can see right and left sides tonnages
- At the maintenance page, you can see PLC input/outputs
- At the control page, you can adjust lubrication times and Lh&Rh tonnage limits
- At the adjustment page you can adjust slide height and jog servo
- At the feeder page, you can adjust feeder angles
- At the alarm page, you can see error and alarms
Would you like to find out more about Bias Multi Servo system?
You can find our complete range of products at www.biasmultiservopres.com.tr
Simply scan the QR code using the camera of your mobilephone or tablet.