# Forging Presses

## Forging Presses for the 21st Century

AJAX reserves the right to alter specifications.

<table>
<thead>
<tr>
<th>Strokes Per Min.</th>
<th>300</th>
<th>500</th>
<th>700</th>
<th>1000</th>
<th>1300</th>
<th>1600</th>
<th>2000</th>
<th>2500</th>
<th>3000</th>
<th>3500</th>
<th>4000</th>
<th>5000</th>
<th>6000</th>
<th>8000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stroke in</td>
<td>8</td>
<td>8</td>
<td>10</td>
<td>12</td>
<td>14</td>
<td>16</td>
<td>18</td>
<td>18</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
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<tr>
<td>Stroke Length mm</td>
<td>200</td>
<td>200</td>
<td>250</td>
<td>250</td>
<td>300</td>
<td>300</td>
<td>350</td>
<td>350</td>
<td>400</td>
<td>400</td>
<td>400</td>
<td>400</td>
<td>400</td>
<td>500</td>
</tr>
<tr>
<td>Ram Face L-R in</td>
<td>17</td>
<td>22</td>
<td>27</td>
<td>31</td>
<td>36</td>
<td>42</td>
<td>52</td>
<td>56</td>
<td>56</td>
<td>60</td>
<td>66</td>
<td>74</td>
<td>74</td>
<td>74</td>
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<tr>
<td>Ram Face F-B mm</td>
<td>430</td>
<td>530</td>
<td>680</td>
<td>780</td>
<td>920</td>
<td>1060</td>
<td>1320</td>
<td>1420</td>
<td>1520</td>
<td>1670</td>
<td>1880</td>
<td>1880</td>
<td>1880</td>
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</tr>
<tr>
<td>Top Knock-out Stroke in</td>
<td>1/32</td>
<td>1/32</td>
<td>1/32</td>
<td>1/32</td>
<td>1/32</td>
<td>1/32</td>
<td>1/32</td>
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</tr>
<tr>
<td>Top Knock-out Stroke cu. ft.</td>
<td>0.032</td>
<td>0.032</td>
<td>0.032</td>
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<tr>
<td>Top Knock-out Stroke cu. m.</td>
<td>0.092</td>
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</table>
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### Specifications

- **Forging Presses**
- **300 to 8000 Metric Tons Specifications**

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Ax-Ceco (The Ajax Manufacturing Company) has designed, engineered and manufactured advanced types of forging equipment for over 100 years. Since the 1930's, when forging presses were initially introduced into its range of forging equipment, we have constantly reviewed and improved our original design features to encompass all the latest design innovations and high-tech options required for a modern forging press to be as efficient as possible for the large scale production of steel and alloy forgings. Based upon a one-piece solid cast steel stress-relieved frame, and well-engineered drive and control mechanisms, the Ajax High Speed Forging Press is a powerful, rigid, fast-operating machine for the production of accurate warm and near net shaped components, as well as conventional hot forgings.

The Ajax Forging Press is offered as a back-shafted or direct-drive machine. Press designs can be modified to give higher torque, variable stroke speed, and longer forging and ejector strokes, according to the work requirements.

Since the introduction of our first vertical forging press into the forging industry and, subsequently, through the design of our Twin Pitman Forging Press and Wide Ram Four Point Suspension Press, Ajax's expertise has allowed our customers a choice of products that best suits each customer's particular application. Adaptation of Programmable Controls and the latest electronic monitoring equipment, used in conjunction with first stage feeders and automatic transfer devices, provides a determination of production capability never before attained. Consequently, through its vast experience in the domestic and foreign forging markets, Ajax has successfully maintained its reputation as a "reliability leader" in the forging industry, making the Ajax Forging Press the valuable and economical forging tool it is today.

Closers Tolerance Forgings

The quality design features of the Ajax Forging Press, particularly its transmission system and the close control guiding of the main ram assembly through its full working stroke, have all been developed for meeting the needs of close tolerance forging. Major design areas influencing the use of the press for high quality, close tolerance and near-net forgings have been engineered for compatibility with most modern and advanced forging techniques, including controlled atmosphere forging.

Longer Die Life

Forging dies for conventional hammers or screw presses must have enough mass to absorb the impact of the blow. Dies used in hydraulic presses must be large enough to dissipate heat generated by metal flowing during the dwell cycle. Since they are not subject to impact or high temperature, forging press dies can be produced as inserts, from selected grades of tool steel that are able to meet the flow characteristics of a particular process. Die life is considerably increased, due to the relevant speed of the press and the subsequent short time that the forging is in contact with the actual die during the bottom part of the stroke.

Operator Skills

Positive ram travel eliminates the need for the judgment of a skilled operator to decide when a forging is down to size. With an Ajax Forging Press, the operator merely trips the press and transfers the heated piece from die station to die station. Automatic ejectors minimize manual effort - even in the production of deep impression forging. The controllable time delay of ejector return reduces worker fatigue. The relatively low labor skill requirement and ease of operation results in high production and low direct labor costs.

Low Maintenance and Downtime

There is no damaging impact as with a hammer. Ajax forging presses run smoothly and without shock. This, combined with a rugged and durable design, results in low maintenance with little downtime.

Efficient Electric Motor Drive

The press is operated by a single electric motor through a multiple V-belt drive. Press installation is simpler and less costly than with other types of forging equipment because only electric power is needed at the press. A moderate quantity of compressed air at about 80 psi is required to operate the air clutch, brake release, ram counterbalance and (when used) air ejector.

Impact Noise and Heavy Foundations are Eliminated

Ajax High Speed Forging Presses are free of the impact noise inherent in a hammer. The forging load is contained within the press frame, minimizing ground vibration (associated with hammers) which can damage other plant equipment and nearby property, or limit operation to restricted hours. The self-contained forging load also eliminates the need for an expensive, impact-absorbing foundation such as is required for a hammer. Foundations for Ajax presses are relatively inexpensive. With good soil conditions, total foundation weight is approximately 50% of the total press weight.