

Ball Forging Systems



Forged Alloy Steel Grinding Balls

Single Blow and Solid Die Forging Systems

Hill Acme Single Blow and Solid Die Forging Systems are designed for high volume production of forged parts from 0.03 lbs to 40 lbs. These Forgers are mainly used for forging grinding balls. Hill Acme Forgers also have proven versatility in the production of parts ranging from Rock Drill Bits to Gear Blanks.

Ball Forging Machine

Hill Acme has developed automatic ball forging machines to meet the growing demand for steel balls used to grind or pulverize cement, paint pigment, taconite and other ores. Available in five sizes, each machine is fully automated, from feeding stock to discharging finished pieces.

Complete systems are available for turning out ½" to 6½" balls from bar stock, typically ¾ths the size of the finished balls. Balls of different contours can be easily made by minor changes in die design or adjustment to suit customer requirements of concentric balls, balls with flash ring or with a concave surface. Ball rounders are also available for greater concentricity.



Single Ball Forging Machine

Ball Forging Machine Specifications

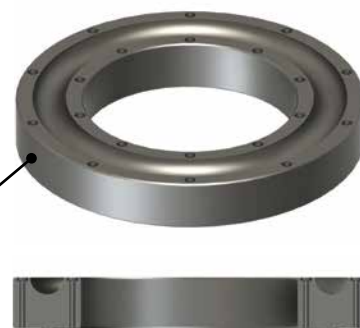
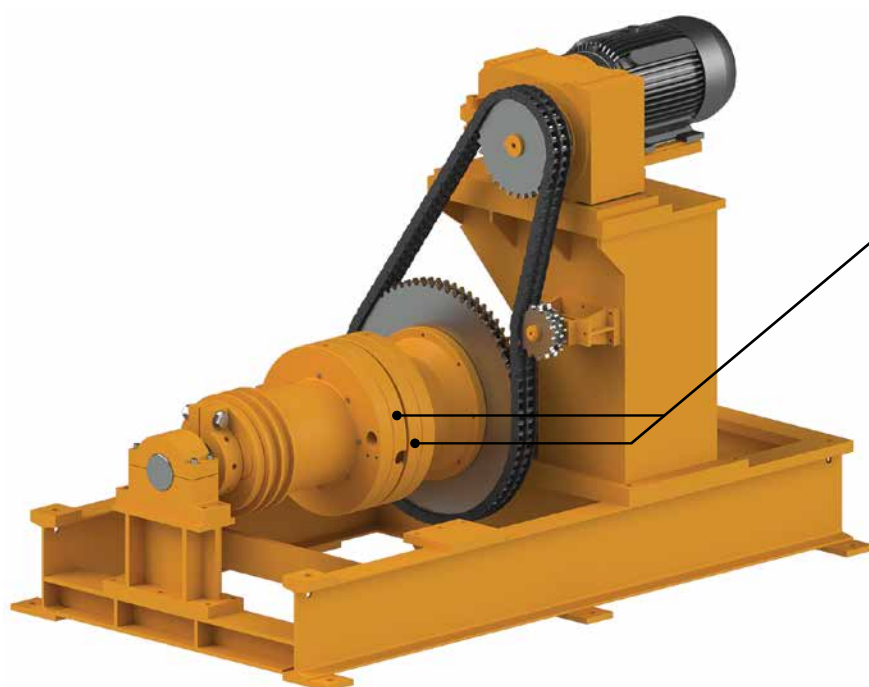
| Model | Production rate (ball size : balls/min) | | | | | |
|--------------------------|--|----------------------------------|---|--|---------------|---------------|
| | 1" | 2" | 3" | 4" | 5" | 6" |
| Single Ball Model | ½"– 1½" : 135 | 1"– 2½" : 120 | 1"– 3" : 80 3½" : 40 | 1½"– 4" : 60 4½" : 30 | 2" – 5½" : 50 | 3" – 6½" : 30 |
| Double Ball Model | ½"– 1" : 270 1¼"– 1½" : 135 | 1" – 1½" : 240 1¾"– 2½" : 120 | 1" – 2" : 160 2¼"– 3" : 80 3½" : 40 | 1½"– 2½" : 120 2¾"– 4" : 60 4½" : 30 | | |

Hill Acme has a system solution for you

Single Pass Ball Rounder

The concentricity and surface finish of the forged balls can be further enhanced, if required, with the use of a ball rounder. The balls from a ball forging machine are guided and gravity fed into its chamber where the balls are completely trapped between two work rings.

One of these work rings is stationary and the other is rotating. The trapped balls are shaped on their way from the entry to the exit side. Any aesthetic imperfections like flash rings formed during the forging operations are reformed in this process.



Turnkey supply

Depending on customer need, individual machines or complete lines of forging systems can be provided. This can include supply of bar unscrambler and feeder, gas or induction type bar heating system, quenching system, normalizing furnace and related material handling and storage equipment.





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