

Manufacturing Processes for Competitive Advantage

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When developing the manufacturing processes for a new product, it is common to follow the same methods as similar products. In the case of ballistics armor plates, the common method of manufacturing is compression molding. This process consists of two steel plates with one or more cavities to produce the final product. The raw material is placed in the cavity and the plates are clamped together under high pressure and heated to a specified temperature. This method is effective but does not allow for large improvements in cycle time and productivity.

A different approach has been employed by ShotStop Ballistics®. In addition to our patented Duritium® technology, which allows a thinner and lighter ballistics plate to achieve the same performance as traditional plates, a proprietary mold heating and cooling process was developed. This process allows for faster cycle times, which translates to lower cost per part.

ShotStop also employs stack molding, which increases the number of parts per cycle. For example, one traditional two-plate compression mold will produce one part, while a four-plate compression mold will produce three more of the identical parts in the same amount of time. Stack molds are more expensive initially, but the increased production recovers the initial cost quickly. The size of the part being produced and the size of the molding press are the primary limiting factors when considering stack molding.

These approaches to production help ShotStop provide a superior product at a lower cost to the consumer.

Interested in learning more? [Contact us here.](#)