

Case Study: Meeting the Design Standards for a Large Metal Part



Customer

Fitness Equipment Manufacturer

Part

Elliptical Ramp - 31.5 inches in length and weighing 54 pounds

Manufacturing Issue

Utilizing multiple suppliers to produce this ramp was becoming a costly and timely issue to meet their production needs.

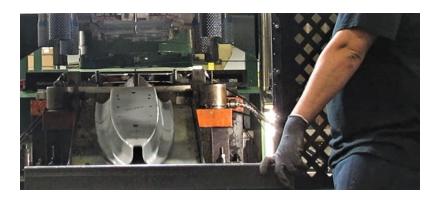
Customer's Goal

Locate a single supplier that could deliver tool building and metal stamping services along with secondary operations for their elliptical ramp.

Manufacturing Process

It was determined through feasibility studies that Ultra's Minster 800-ton stamping press could handle a part of this magnitude. And with our extensive, high-quality secondary operations, the finishing of the ramps would be properly taken care of at **ONE** manufacturing facility.

The elliptical ramps are metal stamped on a progressive die that includes only **ONE** forming station to complete that stage of production. We designed this forming station to include five different operations to be performed in **ONE** hit. The edges, top, sides, and lips are being formed along with coining on the top of the ramp. This forming station is made of bronze material to better protect the cosmetic integrity of the ramps. Another key component was attaining material with protective coating to meet the customer's high cosmetic standards.



The metal stamping of these ramps are closely monitored by a production team that includes Press Operators and Quality Auditors. The Minster 800-ton press can produce 200 of these ramps per hour to meet the customer's production demands.



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Secondary Operations

The edge quality of the ramp is of critical importance to operate properly on the elliptical equipment and also it can be clearly seen by the end user. A detailed finishing process is followed to ensure the edges are smooth and meet cosmetic standards.

- 1. Deburring of sharp edges.
- 2. Polishing of edges with a hand sander.
- 3. Washing the ramp in hot, soapy water and drying with a microfiber cloth.
- 4. Removing the protective coating for final assembly.



Customer Outcome

With Ultra's all-inclusive capabilities, the customer is experiencing faster turnarounds on the ramps for their final assembly needs.

They are also seeing more consistency and higher quality in this final product.

This customer has been so satisfied they are now utilizing our metal stamping and metal fabrication services to produce an additional six parts for their exercise equipment.

View the 800-ton press metal stamping this high-end elliptical ramp.