

Paper Void Fill Machine Product Development & Contract Manufacturing

Background

A leading manufacturer of consumables in the Void Fill Industry sold Styrofoam peanuts, foam in place, air bags, bubble wrap and other void fill medium. The only significant part of the market they did not compete in was the paper portion. Their approach to each market is to develop semi-automatic equipment to assist manufacturers in performing their packing operations. The equipment saves the manufacturer labor hours and ensures that they receive the business for the void fill packaging materials.

Project Description

Advent Design was selected as the engineering development team to design and bring to market a machine to feed Kraft paper, crumple the paper, and cut off the paper. The machine's functional specifications were simple enough, however since the customer was "giving away" the machine and only selling the paper, price was a significant concern. Additionally the machine had to operate in the worst environment in the facility (out on a loading dock or in the shipping/receiving area). Typical locations were the dirtiest and least controlled in the facility with some of the worst power distribution in the facility. An even larger hurdle was that the operators for this equipment were primarily temporary or part time workers whose average tenure could be measured in hours or days during busy shipping seasons and not in months or years. The machine had to be both simple and "obvious" to use. An operator with no experience, no training, no mechanical ability, and potentially not literate had to be able to operate this piece of cutting equipment safely and competently from the first cycle. This presented some unique challenges to the design team.



Proof-of-Concept



Beta / Production



Alpha

Implementation/Impact

Advent Design's project team worked through the proof of concept phase, an Alpha phase, a Beta phase, a pre-production phase, and finally a first-run production phase. The customer now needed a contract manufacturer for this equipment as they were a consumable company and not an equipment company. Advent Design proposed and was selected to perform the contract manufacturing for this product. The combination of development experience, quality, ability to support, and cost made Advent Design the obvious choice. Advent's contract manufacturing work typically leverages the development knowledge, the customer relationships, and ability to support equipment in the field better than any other company to convert various automation or product development projects into long term contract manufacturing opportunities.



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