

Happ Controls Engineering Cuts Control Device Design Time in Half — Cuts Prototype Cost 75%

The Situation:

- Happ's customer supplies arcade rides and amusement equipment to the entertainment industry.
- The industry is extremely fast changing & competitive. The public demands new game and amusement challenges several times per year.
- Market conditions dictate a more responsive concept to market development cycle.

The Problem:

- Customer has fallen behind his own imposed rapid development schedule.
- Critical parts are untested. There is no time for tests to assure robustness.

The Customer Request:

- Take over a development program – bring a customer supplied wood pattern for a 'joystick' grip from concept to injection mold production.
- Program is behind schedule. Bring it back on track.
- Critical part must meet punishment by zealous players without any physical stress testing.



Customer Supplied Balsa Model

Background:

- Prior to Happ's effort, when the customer had a product or part idea, he would contact a vendor with a concept model. Engineering would create 2D detail drawings. In an expensive process, 3D drawings would be created, a stereolithography (SLA) model would be created, an engineering review would be held. Changes would be ordered, and the process duplicated until the part was finalized. Approved, 2D drawings would be sent to a CNC programmer and on to the mold programmer for final mold production.



Final Product

Key Issue – Face to face design reviews can take up valuable time. Can Happ Controls develop a system that trims or avoids the expense of engineering meetings?

(Continued on page 2)

The Happ Controls Solution:

- Happ Controls took virtually all of the design work out of the customer's hands.
- Happ engineers met customer's requirements with a team approach and sophisticated engineering software. Using SolidWorks™ design software, Happ engineers turned the wood model into working drawings. Critical parts were subjected to mathematical stress analysis. The virtual assembly, consisting of five parts was e-mailed to the customer for review. Customer could review and approve this virtual part in any physical orientation. **This process eliminated 3 stereolithographic (SLA) model reviews and 3 face-to-face meetings.**
- Once the virtual drawings were approved, the SLA model was produced and sent to the customer. This step assured that the part had the look and feel of the game it was to be assigned to.
- After the part was approved, Happ Controls engineers e-mailed 3D drawings to the mold maker. He needed only to assign the tool and the tool path to Happ's drawings. Time from receiving the concept model to hard tooling was accomplished in less than ten weeks!

Result:

- Customer schedule back on track.
- Product delivered within ten weeks versus 20 - 23 weeks normally scheduled!
- Happ Controls saves customer 80% on engineering review time.
- Prototype costs cut 75%.

Review:

We want to solve your manufacturing problems.

Our capabilities include:

- **Rapid, cost effective response to your manufacturing needs.**
- **Broad range of existing control device platforms** available to save development costs.
- **SolidWorks™** software used to make design decisions faster, easier.
- **Engineering, testing, and solid modeling departments** at Happ Controls consistently deliver a prototype within required deadline.

Happ Controls combines a cost-effective high capacity manufacturing arm and a quick response engineering team to generate custom solutions.

Call us to find how Happ Controls can solve your manufacturing requirements.