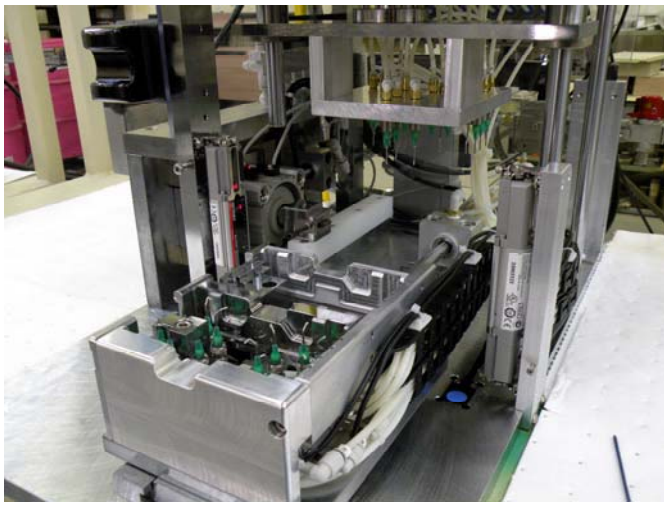
C a s e  S t u d y

# Betz Relies On Misumi Components to Streamline Automation Machine Design and Engineering

***Benefits to customers include lower machining costs and faster delivery times.***

Founded in 1989, Betz Contracting & Machining designs and builds custom turnkey machines, automated assembly fixtures and quality control fixtures for Tier 1 suppliers in the automotive industry. The company's headquarters and manufacturing facility is located in Climax, Michigan.

Betz offers customers a full range of services from prototyping and design, to general and production machining, to controls and automation. The process usually begins with a customer issuing an RFQ for a standalone machine or fixture built to its specific application requirements – and Betz engineers take it from there. Over the years, Betz has earned and maintained its reputation for high quality, reliable machines, outstanding service and a commitment to customer satisfaction.



**Betz Contracting & Machining uses standardized and configurable automation components whenever possible to streamline its design and build processes.**

Frank Bowman III, Betz Engineer and Designer, was introduced to Misumi USA about five years ago by an engineer at a customer's company and has been doing business with Misumi ever since.

"Misumi's ability to configure a part to precise tolerances and with the proper material and finish, within a desirable timeframe was very appealing to us. In addition, receiving a custom-ordered part from a vendor and being able to integrate into our equipment without having to do any in-house work or modification on it is quite unusual," explains Bowman. "With Misumi products, we don't have to worry about that – we get exactly what we order, every time."

Today, Betz utilizes Misumi's standard and configurable components in virtually all of the automated machines and the majority of assembly and quality control fixtures it builds for customers. The most typical components deployed are linear shafts, linear guide rails, bearings, and locating pins.

One example of a typical Betz custom project entails a small machine, 12-in wide by 24-in deep by 16-in high. The machine is designed to precisely hold the customer's product in a nest that travels into a safety-guarded area to be assembled, greased, checked/verified, or a

combination of all three. In this instance, Misumi components are used for the following functions:

- Locating pins are used to locate parts in the nest
- Precision linear shafts are used for the machine housing
- Bearings are used for the traveling functions
- Grease pipes are used for holding the grease

Bowman asserts that one of the main reasons why Betz has continued ordering configured components from Misumi is the exclusive CAD Configurator and native CAD downloads, as well as the convenient, easy-to-use online catalog and Web Ordering System.

Misumi has a unique business model enabling it to offer customers worldwide over 1,000,000 components – many of which can be configured in 1mm increments and ordered over the Web without set-up charges, detailed drawings, or minimum order quantities. In addition, Misumi's rapid order delivery times help customers to increase productivity and fulfill orders faster.

"From a designer's point of view, our goal is to complete the customer's design and get prints to the shop floor in a timely manner, for maximum workflow efficiency and productivity. Misumi's system allows us to do just that – we can configure the part and download it directly to our system, quickly and easily. Online catalogs and CAD configurator are always a beneficial, value-added tool. Many of our other vendors do not offer such a service." Betz design and engineering team utilizes Solidworks and Virtual Gibbs CAD/CAM design software.

**Basic press machine with a spring loaded head for assembling and pressing knobs onto a body. All of the spring loaded heads like this use Misumi's springs, bearings, posts, and washer caps.**

When non-typical machine building projects come in the door, Bowman has also come to rely on Misumi's comprehensive catalog as a time-saving resource for design idea generation.

"Faced with an unfamiliar project, it can take quite a bit of time to envision the end product," he notes. "When this happens, it's not uncommon for me to browse through the Misumi catalog and look at all of their products. This gets my own creative wheels turning and helps me figure out the best way to achieve the desired functionality for the application. Sometimes, I'll even design a fixture based around a particular Misumi component that does the job."

In addition to functionality and reliability, appearance is also an important factor to Betz customers. Bowman affirms that using Misumi products more and more over the years has helped Betz to improve not only the design and functionality of its machines, but their overall

appearance as well.  Typically, a Betz-built machine might consist of about 30 manufactured parts, and Misumi parts might contribute an additional 10 to 25 percent over that.

Overall, Bowman says that using Misumi's precisely configured products – as well as the eCatalog and powerful CAD Configurator – has contributed to significant time and cost savings for Betz.  "Time is money. The more we can reduce the amount of time on a project in any area, the more cost savings we realize. Frequently, that savings can be passed on to our customers, so it's a 'win-win' situation all around," Bowman concludes.

Contact:
Betz Contracting & Machining
320 North Main St.
PO Box 156
Climax MI, 49034

Shawn Betz – President / Engineering manager
Frank Bowman III – Engineer / Designer

Phone: (269) 746-3320