

# BEATSON CLARK

## RAISING A GLASS TO ENHANCED PRODUCT DESIGN

Taking glass design to a new level with Autodesk Product Design Suite delivered by Majenta



### Bespoke Glass for Premium Products

Conditioning, extruding, blowing, pressing, coating and annealing; from the measuring and mixing of raw materials through to labeling and packaging, glassmaking is an intricate process involving extremes of temperature and demanding supreme precision. With experience and expertise dating back to 1751, Beatson Clark is an acknowledged leader and is the UK's largest manufacturer of glass packaging solutions for the pharmaceutical industry. For the past four decades the company has also been serving the food and beverage industry and the food sector is now the company's largest market. If you have ever taken an over the counter preparation or bought a premium brand of beer or preserve it is quite likely that you have held a Beatson Clark product in your hands.

A member of Newship Group, Beatson Clark has an annual turnover of £44 million and 320 employees. The company's factory in Rotherham, south Yorkshire, produces 514 million units each year. An experienced in-house design team works closely with customers, producing an average of 30 new designs each year.

### Designing for Clarity

The nature of glass making means that the design department has two streams of input: design of the end product and also of the moulding equipment in which it will be manufactured. For this, Beatson Clark uses Autodesk's Product Design Suite (PDS), a comprehensive solution of 3D design, simulation, collaboration, and visualisation tools including Inventor®, AutoCAD®, Showcase® and Sketchbook® Designer. This is provided and supported by Majenta Solutions.

Design Engineer Dean Arey, explains the development process at Beatson Clark. "We begin with a proposal drawing showing overall sizes and critical dimensions. Although we are still at concept stage we go straight into Inventor because glass containers will always have constraints that need to be set up. We provide our customers with visualisation images and 3D animations and gradually proposals become more detailed. The CAD models we produce can be used to create wooden or acrylic models if the customer requires them. These can be very realistic, for example a beer bottle may be spray painted to show the liquid inside. We then produce glass samples."

### Customer

Beatson Clark  
[www.beatsonclark.co.uk](http://www.beatsonclark.co.uk)

### Industry

Industrial

### Business challenges

- Improve the development process for customers
- Streamline the management of all technical drawings

### Keys to success

- Consultative approach from Majenta Solutions
- Ease with which existing designs can be amended

### Solution

Provision of a comprehensive suite of software tools from Autodesk; supplied and supported by Majenta Solutions, Autodesk Gold Partner

### Business impact

- Enhanced visualisation capabilities give the customer a much better feel for the design early on in the project
- Users are always viewing the correct version of a drawing
- Continual improvements to both products and the manufacturing process

The challenge for the company is to balance the customer's desire for a unique product with shelf appeal and the production department's requirement for a container that can be made efficiently. "Previously, the focus was on generating engineering drawings – which is essentially what the customer needs to sign off; but actually the quickest way to a signed off specification is to help the customer see the potential of the design through the use of visuals and acrylic. Majenta helped us to get the most out of PDS, offering extra advice and tips so that as users we have been able to learn for ourselves and illustrate advantages to others within the company, for example to show that the sales department could also benefit from enhancing the visuals we present to customers."

### Different Drawings for Different Departments

Once the design has been completed and approved, the design department produces technical drawings then turns its attention to preparing drawings for the moulds and other manufacturing equipment. "We produce between 15 and 20 drawings for the various parts of equipment needed to make one container," explains Dean. "These drawings, distinct to each product, are distributed to different departments for approval. They also need to go to the external manufacturer of our mould equipment, and to the supplier which provides additional mould repair services."

Although the digital data for products and manufacturing equipment had always been held centrally within the design department, there were inevitably paper copies in all other departments. As Dean explains, "Each department has a different need and so refers to a different drawing. Everyone needs to look at drawings and the design department did not want to create any unnecessary restrictions. However it was time consuming to ensure that all drawings throughout the company were updated when a design was revised. We were also acutely aware that there was potential for error if some copies were overlooked."

Looking to achieve a balance between access and accuracy, Beatson Clark decided that it was time to upgrade to a more efficient system of managing drawings. Dean again: "Majenta was already providing us with Product Design Suite and we have made much progress with this, gradually moving digital data over from our legacy software into Inventor. As PDS incorporates Vault Basic®, the file depository, this was the obvious choice. It made sense to keep our CAD software and data storage software with one technical partner. We therefore asked Majenta for guidance implementing Vault."

### Accessible and Accurate

The overall goal was for every department, including non-engineering departments such as sales, to have the appropriate level of access to Vault. The design department was particularly keen to ensure that roll out was seamless and easy. "We did not want to create any extra effort for colleagues who are already busy and we certainly did not want to run the risk of anything not working correctly when users logged on to Vault. Our contacts at Majenta were extremely helpful in addressing our needs and helping us to achieve what we wanted through a consultative approach. In particular they assisted with creating a case for the business benefits of implementing Vault. We were therefore pleased that Majenta took responsibility for setting up and fine tuning permissions."

Beatson Clark is on Majenta's Subscription Plus package. This provides software updates, technical support and access to Majenta Exchange, the portal for sharing large data files. "The Majenta Exchange portal is the key to improving communication with technical suppliers, in particular one of our mould makers. Because we now have the means to send original CAD data we can avoid the need to remodel and ensure that very precise details such as the embossing on a bottle remain exactly as they were created."

### Continually Improving

Dean reports that as a result of streamlining the use of technology there is much more work going through the design department now. "We've had Product Design Suite for some time but now we are employing it more effectively, using Inventor for 80% of our design work and this opens up new opportunities. For example, when a set of mould equipment becomes worn out, we now easily capture suggestions for improvement made by other departments. Now 90% of drawings are updated. That's really driven up our workload but we know that we are doing it for the benefit of the business and a positive outcome. If the company is continually adapting it is also thriving."



"Technology is enabling us to pull together the product design and manufacturing design aspects of the business. The experts at Majenta Solutions went beyond what you'd expect from a technical support supplier and with their assistance we are working together more efficiently to provide a better service for our customers."

Dean Arey, Design Engineer, Beatson Clark

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