



Design that delivers profitable manufacture

Select range: Suez Water UK

We like a good challenge

Pure laboratory water differs from clean water because it has all the impurities removed, creating a powerful solvent. Different levels of pure water involve different processes, so manufacturers of the equipment have to produce a wide range of products. When we first met the engineers at what is now Suez Water UK, they had a bewildering array of product variants, each with its own part list, and all made in very low numbers. The challenge, should we choose to accept it, was to design a range of products that would do everything the existing ones did, but with more component integration, improved suitability for low volume manufacture and dramatically better looks (the old ones were housed in remarkably ugly square metal boxes...)

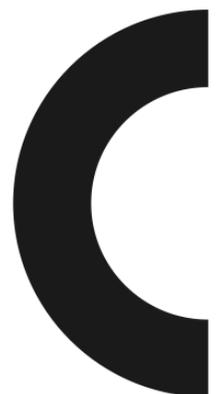


Entering the matrix...

The project began with a detailed look at the different products that made up the pure water range, and the preparation of a detailed matrix that enabled us to define them as a series of modules that could be combined to create every variant. These modules were then developed into physical assemblies that could be built using simple sheet metal sub frames. Detailed CAD models allowed us to combine these assemblies into all the different permutations that would enable Suez to make up the entire range.

Putting it all together

With the practical issues resolved, we then began to look at how these modules could be combined with an external housing that would work for every product variant. The final design included simple sheet metal





sides and rear panels with vacuum formed mouldings on the top and front surfaces. This reduced investment to the minimum whilst also allowing the flexibility to incorporate pure water tanks on the side of some variants. Finally, we designed a dispense pod that could be attached to some products and replaced by a blanking plate on others that was designed to look integral with the design - not just an afterthought to cover a hole in the casing.

Improved manufacture and a better product

The reduction in inventory size, combined with improved speed of production, increased ease of use, higher quality appearance and a more coherent product range all combined to deliver a great result for Suez Water UK.



As Mark Bosley, the Product Manager for Suez Water UK put it:

“The benefits that Crucible brought to our business are extensive. Their manufacturing concepts and designs now allow us to assemble product from pre-assembled modules, thus reducing our build times for finished units. This has dramatically reduced the time taken to convert customer

orders into finished goods. I wouldn't hesitate to recommend their services”.

About Crucible Design

Mike Ayre established Crucible Design Ltd in 1990. Crucible works across all areas of product design and development, with an emphasis on meeting specific client needs, including sales improvement, cost reduction, technical innovation and the sourcing of manufacturing partners.

This focus on the commercial benefits of good design has generated an excellent track record of successful projects and the practice has also won a number of design awards for appearance, innovation and technical expertise.

