Design that delivers lower costs

Tropical Marine Pondclear

Mission: Impossible?

This is what we thought when we saw the design brief for the Tropical Marine PondClear project.

The device was used to remove algae from ponds by treating the water with exposure to high levels of UV. The company had been making the original version of the product (right) for some time, and it was an apparently simple arrangement of control electrics, a UV chamber that was plumbed into the filtration system for the pond, and a number of cables.

The main objective of the project was to reduce costs. At first glance, there appeared to be no way to do this, as it had no outer casing and nothing that could be removed to save money.

Looking from another direction

The absence of any obvious ways to reduce costs prompted us to ask detailed questions about the product. For example, why was it fitted with a short length of mains lead, when most installations would be a long way from the house? The client wasn't sure, but thought it would be better to have some cable than none at all. We introduced a simple cable connection block and suggested that the customer could supply their own cable - of the right length - and connect it themselves. Result? A significant saving in cable costs, assembly and packaging (and a safer installation with no joined cables).

Next, we asked why the UV chamber was painted. It turned out that that the chamber was made of standard pipe fittings and did not look good in

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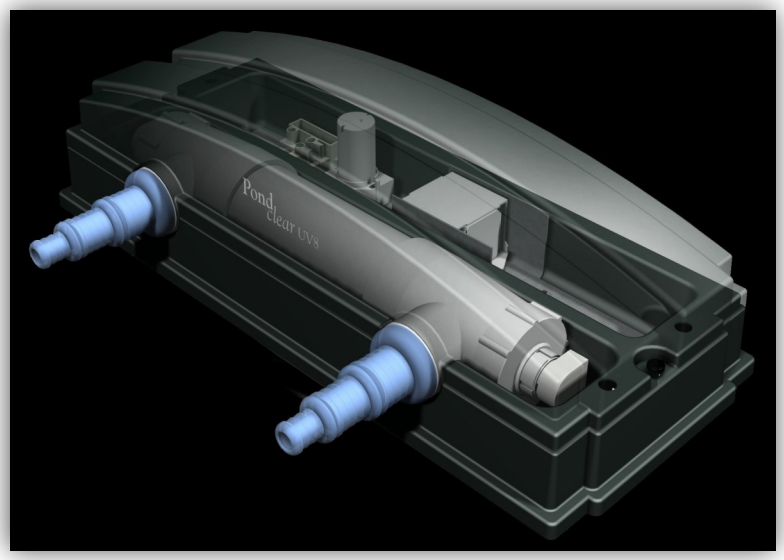
design that delivers

an untreated state. By leaving the chamber unpainted, but putting it in a simple, vacuum formed plastic housing (below), the costs actually came down and the product started to look like…well, a product.

Finally, we asked if the electrics really needed to be kept in an expensive sealed box designed for submersion. The product only needed to be rain proof, as it usually sat in the flower border next to the pond, so the vacuum formed housing was designed to shed water.

Mission accomplished



The result of placing the UV chamber and simplified electrics inside a two part vacuum formed housing was dramatic. Production costs went down by 27%, largely because of the simple assembly and removal of an expensive paint process.

The new product was launched within five months and sales doubled. Richard Sankey, the Founder of Tropical Marine Centre said:

"Crucible's focus on delivering a design with unique features produced a low cost solution that remained successful in the market for over ten years. Their professional but easy going approach and their understanding of our limitations made them incredibly easy to work with"

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.

