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## Faulkner Moulds Designs and Creates Tooling for Unique Versatile Flood Defence Device

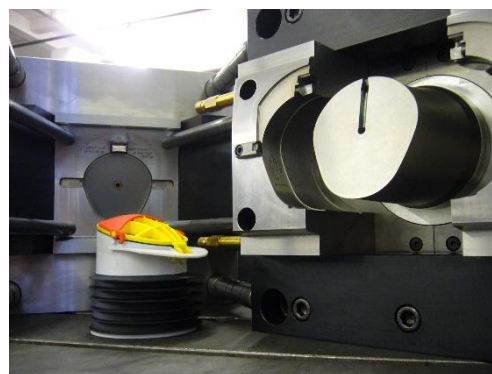
### Close Working Relationship

In 2015, Faulkner Moulds, a Plastic Injection Mould Toolmaker based in West Yorkshire, fully designed and created the tooling for 3 patented products for their customers, all of which are now successfully selling at market. As Duncan Faulkner, Managing Director, explains, “We always work closely with our customers throughout the full design and manufacturing process. It is a highly individualised, bespoke service that we provide, and our customers tell us they just could not achieve this through foreign toolmaking”.

In addition, Faulkner Moulds never subcontracts out any part of their work – everything is done in-house. This further safeguards confidentiality of ideas – something that experienced manufacturers and new inventors alike find reassuring.

### Unique Flood Defence Device

One of the 3 patented products is the Water and Rodent Non-Return Valve (NRV), which successfully prevents rodents and noxious fumes from entering properties and stops the backflow of sewer effluent during flooding. The part is fitted outside the property, within the inspection chamber for the sewerage system.



Above left: The NRV product; Above right: The NRV main body tool with moulding

Faulkner Moulds and Fisher Plastics – an experienced precision injection moulder based in Huddersfield – joined forces and combined their vast technical expertise to create this innovative product.

Jeff Monks, Managing Director of Fisher Plastics, is “happy to work with Faulkner Moulds”, explaining that the two teams are “expert at brainstorming ideas before focusing on the solutions that optimise the product design, the tool design, and the efficient manufacture of a product that can truly delight the customer”.

The customer says: “We knew the NRV designer, toolmaker and moulder would require a highly technical understanding of how all the component parts could be moulded and assembled together successfully. We also wanted something that would far outstrip any similar products available in the marketplace. We chose Faulkner Moulds and Fisher Plastics for their proven track record in product development and high quality tooling”.

### **Overcoming Technical Challenges**

As Duncan Faulkner, Managing Director at Faulkner Moulds and designer of the NRV, explains, “We discussed with the customer and moulder the option of overmoulding in TPE the veins which were sparked onto the sidemovers and also overmoulding an O-Ring on the top face so this formed a seal for the lid. We were able to successfully incorporate this in a single tool.”

After the tool was completed, a modification was made at the request of the customer to insert a stainless steel plate within the lid, to ensure full rodent protection. This also required a rethink on the hinge, so a mechanism was included on the component to lock the lid in place. This simplified the design, reducing the need for nuts, bolts or screws. As a result, unit costs were minimised and assembly of the moulding was far easier.

The design brief required that the NRV could open around a bend in the pipe, and not foul the side wall.

### **A “Premier League” Result**

The customer says, “We were delighted that Faulkner Moulds designed a superb product that looks and functions far better than anything else on the market. The NRV is moulding excellently by Fisher Plastics and selling successfully. It truly is a Premier League product, making the competition look Sunday League in comparison”.

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