

## Toolmaking Transfer Case Study

### A case for **Micro Medical Ltd**

#### COMPANY HISTORY

Micro Medical Ltd is at the forefront of cardiopulmonary medicine and aim to remain the world market leader in the origination, design and manufacture of highest quality specialist Cardio-Respiratory devices. They maintain an active policy of continually developing and improving their products to remain at the forefront of new technology and innovation. Registered in 1983, Micro Medical Ltd is a dynamic and growing company. The organisation, based in Chatham Maritime, Kent, UK has a comprehensive network of dedicated distributors throughout the world. Seventy percent of sales come from the export market and the Queens Award for export was gained in 1998. Micro Medical Ltd are now part of the VIASYS Healthcare group. This will ensure an even greater commitment and presence around the world to both current and new customers alike.

#### THE RELATED PRODUCT IN CASE

##### **PulmoLife**

Micro Medical Ltd first communicated with HBC regarding the transfer of tooling for a number of components to satisfy a rationalisation of their supply chain. While Micro Medical's Production department were conducting these discussions, Research and Development were working on a new hand held spirometer, the PulmoLife. The 'Uni Directional Mini Turbine' component sits in the part of the PulmoLife product that a patient blows into to measure lung capacity (see picture and demo at [www.micromedical.co.uk/interactive.asp](http://www.micromedical.co.uk/interactive.asp))

The completion of this component is carried out by a specialist bearing company in Germany. The clear polycarbonate shell that holds the rotating vane was at that time being manufactured with some difficulty by a moulder in the UK, and the project manager of PulmoLife, Dean Forster, took the decision that the mini turbine component's polycarbonate shell should be transferred with existing tooling to HBC who would undertake a tool health check as they recommend for all transfer tooling.

##### **Into Production**

The turbine casing is now into production and is being integrated successfully into the PulmoLife. However this has not been a pain-free experience, and like many engineering projects, it required a great deal of persistence to achieve not only the high tolerance levels required to fit into the housing with absolute precision, but also the manufacture of a clear moulding to retain a glass like finish and clarity as this turbine part is removed and cleaned by the user on a regular basis. The plastic used is Macralon.



## THE WORKING PROJECT

Whilst HBC rose to the challenge and achieved the tolerance levels required, the product is not 100% aesthetically perfect and there is some blooming around the injection point. Project manager at Micro Medical Ltd, Dean Forster, understands the basis of the problem, however he views HBC's ability to work with clear plastic as a learning curve. One should add at this point that the performance of the component and the PulmoLife product is not affected in any way by the blooming. Tooling transfers are not always straight forward. The project manager at HBC, Gordon Nicholson, who spent many hours with his team achieving the results, realises that on certain tasks 100% cannot be achieved while working with existing tooling. The PulmoLife product is now extremely successful and the R&D project manager Dean Forster went on to say that HBC have proven to be a strong supplier and project manager, keen to get involved to find a solution, and he would not hesitate to recommend HBC as a supplier of plastic mouldings to other areas of his company and other companies known to him. When recommending HBC injection moulding services using clear plastic materials he added his recommendation would follow with further qualification.



CLIENT STATISTICS	
<b>Company</b>	Micro Medical Ltd
<b>Parent Company</b>	Viasys Inc
<b>Staff</b>	100 in UK
<b>Turnover</b>	£8 million
<b>Type of products</b>	Micro Medical Ltd are the world's leading manufacturer of turbine spirometers.
<b>Location</b>	UK Headquarters, Chatham Maritime, Kent
<b>Overseas supply</b>	Europe and Far Eastern Suppliers
<b>Product sourced</b>	Mini Turbine for PulmoLife
<b>Tooling</b>	Existing, commissioned Toolcheck
<b>Issues</b>	Experienced quality issues with existing moulding supplier. Transferred Tooling to HBC. Component now achieves required tolerance levels which are exact due to housing within the PulmoLife shell. Some aesthetical blooming exists on clear area by injection point due to previous tool design.

## HBC - THE COMPANY

HBC has been serving the engineering sector for over 40 years. During this time we have maximised our skills to suit our customers from sectors including Electrical and Medical. We provide a range of services that compliment many a manufacturing project. The versatility of our engineering project management leaves customers to concentrate on their own solutions safe in the knowledge that the supply chain is fluid with HBC. Operating from our premises based at Sheerness, in Kent, we are equipped with the latest technologies to design and manufacture your "complete solution" under one roof.

HBC produce a range of case studies for differing types of projects. Please contact our marketing team for more cases or Paul Blackmore on 01795 586301 or email [paul.blackmore@hbcengineeringsolutions.com](mailto:paul.blackmore@hbcengineeringsolutions.com)

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