

Case Study - 'Minimesh'

Services offered by Culzean



Client

Mpathy Medical, a rapidly growing medical device company has developed and brought to the market a range of surgical solutions used to restore pelvic health to women.

Mpathy Medical's core product lines - Minitape and Minimesh - are used by surgeons specializing in urogynaecology, gynaecology, and urology to treat female urinary stress incontinence and pelvic organ prolapse.

Founded in 2003 by a surgeon, Dr. James Browning, Mpathy Medical supplies the only mesh solutions designed specifically for the female anatomy and physiology. The mesh - branded Minimesh - is a physiologically compatible, ultra lightweight polypropylene mesh which encourages superior collagen growth and works in concert with the patient's own natural tissue for optimum safety and results. Mpathy Medical has received 510(k) clearance to market by the FDA in the US and CE marking in the UK for all its medical devices..

The Project

Mpathy Medical identified an opportunity to present an exceptionally lightweight medical mesh fabric to the urogynaecology, gynaecology, and urology market and approached Culzean to develop their conceptual idea into a production ready Textile Solution. The project required Culzean's input at all levels ranging from development of the mesh structure to stabilizing and finishing processes for the mesh.

The Textile Solution

Culzean developed a polypropylene warp knitted mesh fabric that utilised fine monofilament yarns. The structure of the fabric was design to provide specifically engineered pores sizes to encourage enhanced cell growth while also providing a suitably strong and lightweight mesh.

Once the Textile Solution was approved, Culzean continued to work with Mpathy Medical to take the concept from an initial prototype to a bespoke clean room manufacturing environment which was specifically designed and commissioned by Culzean for the project.

