

Cleanroom injection moulding is an integral part of MiniFAB's unique combination of capabilities. Volume manufacturing of plastic parts is an area traditionally dominated by injection moulding because of its cost effectiveness. This is a factor particularly relevant to the manufacture of disposable medical diagnostic devices that are often targeted for low cost, single use applications. Further to cost restraints, environmental conditions during manufacturing are generally just as important, and in some cases even more so. Injection moulding inside a cleanroom environment is a logical response to meet the stringent GMP guidelines that govern the manufacture of products for medical and pharmaceutical purposes.

MiniFAB's injection moulding capability is located in an ISO 7 (Class 10000) cleanroom. Their all-electric, 60-ton machine ensures outstanding process control and high levels of precision for the production of over a million components annually.

One of the key competitive strengths of MiniFAB's moulding service is their in-house tool-making facility. In a dedicated workshop parts for the injection moulding tooling are created using nickel forming techniques. The use of high precision nickel forming allows MiniFAB to prepare tooling with micro-sized features that cannot be created using conventional techniques. These tools, in conjunction with their cleanroom-based precision moulding press, and ISO 13485 accreditation, provides customers with a rather unique capability that is particularly suited for high precision medical products.

The broad range of additional capabilities available as post-processes amplifies the value of MiniFAB's cleanroom injection moulding service. These services vary from metallization, surface coatings, to assembly and packaging and much more. A recent example of a medical product that profits from such a combination of processes is the TearLABTM Osmolarity Test Card that contains three separate components, all made and assembled by MiniFAB.

Steve Zmina, VP of Manufacturing at TearLABTM explains; "there is a clear advantage to work with MiniFAB because all of the key processes required for the fabrication of the TearLABTM cartridge are located in the same building and even in the same cleanroom area. For TearLABTM this means lower production costs and a much better control over quality which is critical for our product".

For More Information

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