



MPE
Quality, Reliability, Performance

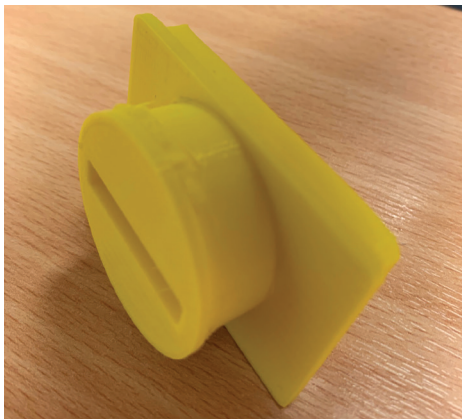
Company Bulletin

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The MakerBot Replicator Plus



Prototype end cap

3D printing of prototype components

In September 2019 MPE made a significant investment by implementing the MakerBot Replicator Plus 3D printing capability.

Whilst new material parts or custom products were previously electrically modelled and mechanically drawn by MPE to predict form, fit and function characteristics, these design functions could not always highlight all practical manufacturing realities and the complexity or simplicity of subsequent assembly work.

The new system allows MPE to print a wide range of newly designed material parts, checking how these components fit together, and confirming the complexity of any required assembly operations. This greatly assists MPE's design processes, enhancing design accuracy and efficiency whilst accelerating the introduction of new or customised products into manufacturing.

With a build volume of 29.5cm long x 19.5cm wide x 16.5cm high, the state-of-the-art MakerBot Replicator Plus combines outstanding performance with superior results and long-term reliability. The system prints high-quality concept models faster, easier and with a 25% bigger build volume than the previous Replicator model.

Accepting outputs directly from the AutoCAD Inventor 3D CAD software currently used in MPE's Design Department in Liverpool, this 3D printing facility is a fully integrated capability already used to realise new product designs.

The component image to the left depicts one such example, where a prototype "end cap" was produced using the MakerBot Replicator Plus.

This prototype was used to refine and finalise the sealing processes required, in order to meet the stipulated electrical and mechanical parameters and also to ensure that volume assembly was achievable. The finished end cap was incorporated into a customised MPE product supplied for an overseas defence application.