



The HP Molded Fiber Advanced Tooling Solution

Detail of HP digitally designed molded fiber screen

The HP Molded Fiber Advanced Tooling Solution

Providing manufacturers of molded fiber products expanded tooling capabilities for greater production efficiencies and design opportunities.

HP's end-to-end service can enable additional profitability by combining proprietary tooling technology and engineering expertise to help cut lead times, help increase operational efficiencies, and enable customization.

Rely on us to help you deliver quality molded fiber products, faster¹

HP is a solution provider the industry can rely on, providing molded fiber manufacturers a competitive advantage by accelerating tooling fabrication and expediting delivery to customers.

Production-ready tooling is ready to be shipped **in as little as 2 weeks** after finalizing your design specs with HP's engineering team,² who can work with you to achieve greater **part repeatability with sharp, clean edges and borders, and crisp, legible markings** and **reach tool consistency**—that can result in more uniform production behavior and quality parts—with screens that resist wrinkles.³

Using the **HP AdvancedPro Transfer Tool**, it is possible to improve **transfer side smoothness** to match form side smoothness **without after-pressing, and produce parts with low draft angles**.

Now you can get production-equivalent customer part prototypes quickly off the same tools that can be used for normal production.



“The screens are lightweight, they can be swapped easily and they can be changed easily. Not just that the setup is easier and quicker, but being lightweight puts a lot less stress on the machines. The HP Molded Fiber Advanced Tooling Solution parts are significantly lighter and that will have a tremendous benefit for our equipment maintenance costs.”

Jason Wu,
Managing Director at Fiber Innovation

Increased OEE and reduced downtime¹

HP's easily replaceable screens and on-demand ordering from our digital warehouse help simplify your tooling management system.

This solution helps optimize your process for specific needs—**make stronger parts with less fiber, thanks to higher first pass pulp retention and higher capture of long fibers**.

Now, you can avoid hang-ups with integrated block-outs and deckle wash walls, and **replace screens in minutes without removing tools from your machine**, for fast product customization. And you can help to reduce your engineering teams' workload, as HP designs your production tooling for you with strict confidentiality.⁴

HP molded fiber tooling helps keep your machines up and running by reducing maintenance with tool materials that are not subject to corrosion⁵ or calcification⁶ in water.

Additionally, improve process efficiency by de-watering through the new HP AdvancedPro Transfer Tool.⁷



“Brand owners want more sustainable packaging but haven't always been able to pay for it or do the work to find alternative materials. Now the tides have turned. Increased consumer demand to get away from plastics and foam has companies scrambling to re-establish sustainability goals, and HP's tooling solution aligns perfectly with this renewed focus on sustainability.”

Josh Larson,
Global Business Manager at Veritiv



Open new revenue streams with customization and fast product development

Deliver additional value to your customers with **quick and cost-effective custom features**—such as embossed brand logos, textures, model numbers, or traceability information—with the **ability to place markings on horizontal and drafted surfaces with crisp legibility.**

You can now efficiently perform frequent changeovers with **lightweight tools** and rapid snap-fit HP SmartScreen replacement⁸ and augment generic commodity production with higher value customization.

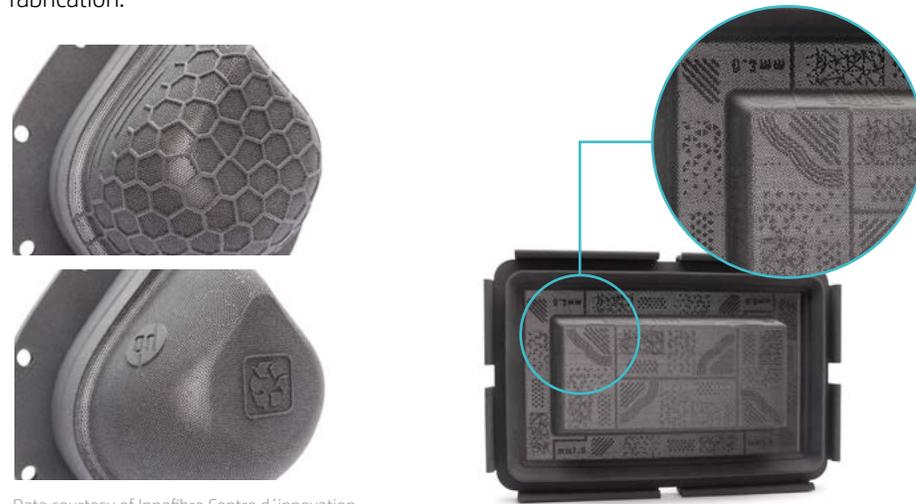
You can also easily accommodate changing customer requirements with HP's proprietary digital technology that enables new levels of agility and versatility for tooling design and fabrication.



Data courtesy of PMD

“ HP's Molded Fiber Advanced Tooling Solution is different, and we were really thrilled with it. I was pleasantly surprised with the sharpness and the details on some of the parts we produced. The definition of the text in our parts made by the HP SmartScreens was amazing. There was incredible clarity compared to conventional tooling solutions. ”

Bill Martin,
Director of Operations at Western Pulp Products Company



Data courtesy of Innofibre Centre d'innovation des produits celluloseux

Learn more at hp.com/go/MoldedFiberTooling

Note: all third parties referenced in this document have received parts produced through the HP Molded Fiber Advanced Tooling Solution.

1. Compared to traditional CNC and manual tooling processes as of June, 2020. Based on internal HP analysis and testing including expert interviews and a review of published market reports. 4-6 weeks average fabrication lead time when producing in CNC.
2. Shipping in as little as 2 weeks after HP receipt of design file, detailed specs, the tool design quotation approval, purchase order, and receipt of first payment.
3. Compared to traditional CNC and manual tooling.
4. Secure online platform offering password protected intellectual property and encrypted access control.
5. Polyamides in HP 3D High Reusability PA 11 material do not corrode with water (a common problem with metal tooling). Based on internal HP testing, August 2020. HP tools produced with HP 3D High Reusability PA 11 material were tested over 5 days at 50° C (122° F) using 4 different solvents (DI water - control, tap water, CaCO₃ saturated, and 5 wt% aluminum potassium sulfate), and presented no visual signs of corrosion. For details, see: hp.com/go/MoldedFiberWhitepaper
6. Polyamides in HP 3D High Reusability PA 11 material do not present calcification signs with water (a common problem with aluminum tooling). Based on internal HP testing, November 2020. HP tools produced with HP 3D High Reusability PA 11 material were tested over 17 days at ambient temperature using 3 different solvents (DI water - control, tap water, CaCO₃ super-saturated), and presented no visual signs of calcification or weight changes. For details, see: hp.com/go/MoldedFiberWhitepaper.
7. Compared to traditional CNC and manual tooling. Based on testing commissioned by HP and performed by Innofibre, February 2021.
8. No machining, drilling, or manual screening needed.

© Copyright 2021 HP Development Company, L.P. The information contained herein is subject to change without notice.

Nothing herein should be construed as constituting an additional warranty. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services and/or in a written agreement between you and HP. HP believes that the information herein is correct based on the current state of scientific knowledge and as of the date of its publication, however, to the maximum extent permitted by law HP EXPRESSLY DISCLAIMS ANY REPRESENTATIONS AND WARRANTIES OF ANY KIND, WHETHER EXPRESS OR IMPLIED, AS TO THE ACCURACY, COMPLETENESS, NON-INFRINGEMENT, MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE (EVEN IF HP IS AWARE OF SUCH PURPOSE) WITH RESPECT TO ANY INFORMATION PROVIDED. Except to the extent that exclusion is prevented by law, HP shall not be liable for technical or editorial errors or omissions, and damages or losses of any kind or nature that result from the use of or reliance upon this information, which is subject to change without notice. The HP Jet Fusion 3D products have not been designed, manufactured or tested by HP for compliance with legal requirements for specific 3D printed parts and their uses, and recipients are responsible for determining the suitability of HP Jet Fusion 3D products for their uses, ensuring compliance with applicable laws and regulations, and being aware that other safety or performance considerations may arise when using, handling or storing the product.

