

Optimizing Waste Management in Production Machinery with Additive Manufacturing



Industry
Production Machinery



Material
PA12, manufactured using MJF (Multi Jet Fusion) technology

With 3D printing and vapor smoothing, Norden's trim waste chute delivers better flow, reduced friction, and enhanced cleanability, setting new standards for production machinery.

About the Application

The trim waste chute is a key component in Norden's production system. It ensures efficient handling of waste material generated during tube trimming while maintaining hygiene.

Traditionally, this part was manufactured from sheet metal using multiple production methods, increasing production time, cost, and assembly complexity.

Challenge & Solution

The original sheet metal design was complex and relied on multiple manufacturing methods, leading to inefficiencies.

Norden simplified the production workflow and replaced the traditional build with an MJF printed PA12 design requiring no machining.



Trim waste chute before PostPro Vapor Smoothing



Trim waste chute after PostPro Vapor Smoothing

The Difference Made by PostPro Vapor Smoothing

To further enhance the part's performance and finish, AMT PostPro vapor smoothing was applied, delivering:

- **Improved cleanability:** A sealed surface prevents buildup of dust and debris, making the chute easier to maintain.
- **Lower friction:** A smoother inner surface reduces surface friction, promoting better waste flow and minimizing the risk of blockages.
- **Enhanced aesthetics:** The polished finish enhances the overall appearance.
- **FDA compliance:** Using PostPro Pure supports compliance with food contact standards, provided the base materials are suitable.*
- **Broader application usability:** The high-quality finish makes the chute suitable for more demanding production environments.

Conclusion

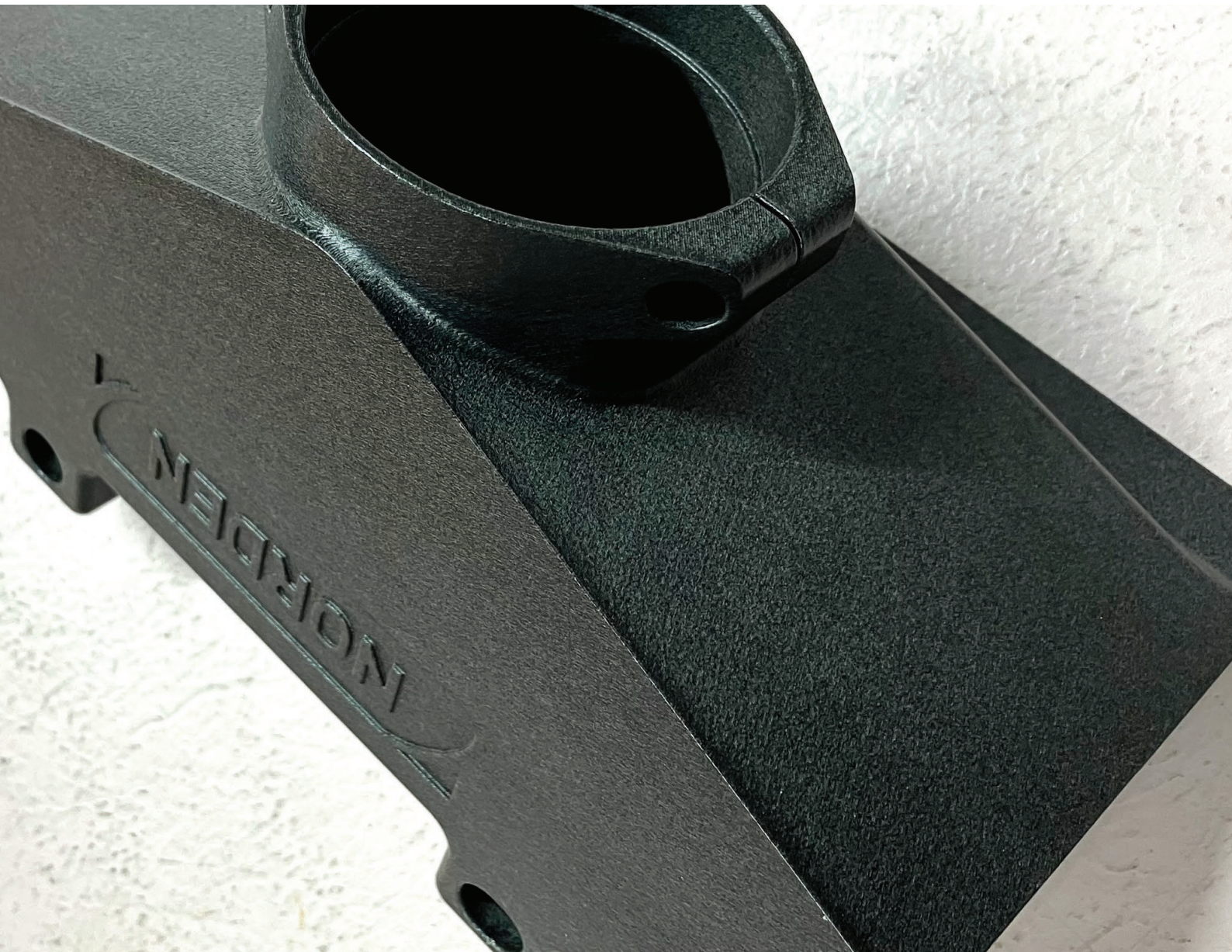
The integration of vapor smoothing into their production workflow allowed Norden to optimize part performance and simplify manufacturing.

This demonstrates how additive manufacturing, and AMT post-processing, can set new standards for efficiency and performance in production machinery.

Benefits of Vapor Smoothing for Production Machinery Applications:

- ✓ Better cleanability & hygiene, crucial for industrial environments
- ✓ Reduced friction for improved material flow and functionality
- ✓ Polished, professional finish that enhances the product's look

*AMT cannot verify or take responsibility for the regulatory compliance of the original 3D printing material. Customers must ensure that the materials used meet the relevant food contact regulations for their final application.

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