



Reifenhäuser

BLOWN FILM POLYREMA

The Extrusioners

FACTSHEET

Why the industry needs biofilms – and how to produce them efficiently.

Biopolymers are biodegradable and based on plant material that can be cultivated indefinitely. Thus, they enable environmentally friendly solutions for the plastics industry. Reifenhäuser offers high-quality lines and components as well as outstanding solutions for the processing of organic raw materials.

1. Global efforts for sustainable packaging

Governments and companies worldwide make great efforts to reduce plastic waste and switch to sustainable packaging solutions. China, for example, is following a five-year plan to increase the use of recyclable and sustainable packaging. Major suppliers are also working to minimize the use of disposable plastic. More and more consumers are developing an ever-greater awareness of and interest in sustainably produced goods. Therefore, the global market for biodegradable biopolymers is growing rapidly. Experts estimate a market volume of up to almost 28 billion USD by 2025 – a tripling compared to 2018 with the strongest growth rates in APAC (Source: MarketsandMarkets Research Private Ltd.).

2. Environmental impact of biopolymers and their applications

Biopolymers are suitable for a wide range of applications and can significantly increase sustainability in plastics production. They are biodegradable and renewable since they are made from plant material that can be grown indefinitely and are sourced from non-food agricultural crops. They also reduce CO2 emissions and create a base for sustainability in the

packaging industry. They can be used in industrial composting processes and decompose in six months or less. The end-use applications of biofilms for customers are manifold: Garbage bags, vegetable bags, carrier bags, mulch films, and now also food packaging with good barrier properties!

3. Reifenhäuser: High-quality lines and components for biofilms

Reifenhäuser offers high-quality lines and components for processing biopolymers and biofilms with superior properties. EVO blown film lines offer maximum flexibility and efficiency in terms of application, so they can not only process biopolymers, but are also suitable for standard raw materials. That is mainly due to the EVO Ultra Range extruder, which is the most versatile extruder in the world. Thanks to its universal screw design it is suitable for all types of biopolymers, polyolefin and barrier resins without requiring hardware changes. EVO die heads guarantee exceptional quality and output performance. The patented EVO Ultra Flat Plus stretching device enables cost and material savings of up to 40% while improving film properties, and delivers the highest energy efficiency on the market.



EVO Blown Film Lines – for biopolymers and standard resins

- Processing of biodegradable barrier films
- Also suitable for standard resins
- Highest flexibility
- Easy operation with EVO OS
- Fastest changeover times



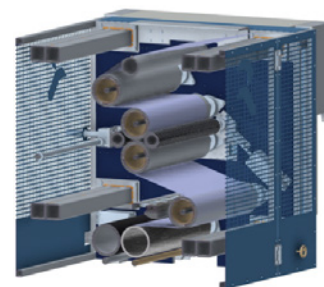
EVO Ultra Range Extruder – the world’s most versatile extruder

- One universal screw design for all types of biopolymers, polyolefin and barrier resins
- No hardware change required, fastest changeover times
- Unique technology that enables highest film qualities
- The world’s most efficient cooling/heating system that enables enormous output boost



EVO Die Heads – exceptional quality and output performance

- Optimized die heads in axial, spiral, mandrel and horizontal distribution
- The world’s widest portfolio with die diameter range from 40 mm – 2,500 mm
- Special die heads dedicated to biopolymers for up to 400 kg/h on a 250 mm die diameter



EVO Ultra Flat Plus – best-in-class stretching device

- Patented technology that enables material savings up to 40%
- Superior film flatness and reduced camber
- Increased printing and lamination results
- Faster film converting
- Thinner films with better performance
- Highest energy efficiency on the market