



Reifenhäuser

BLOWN FILM

The Extrusioners

FACTSHEET

All-PE Films: How to produce high-quality and sustainable packaging solutions cost-effectively using the patented ULTRA STRETCH and its unique position

The worldwide demand for sustainable packaging solutions is rising significantly. Recyclable mono-material composites are a way to comply with legal regulations and growing environmental awareness. EVO Ultra Stretch provides the best solution for PET replacement films, with the highest quality and cost-effectiveness.

1. Mono-material composites enable recyclability

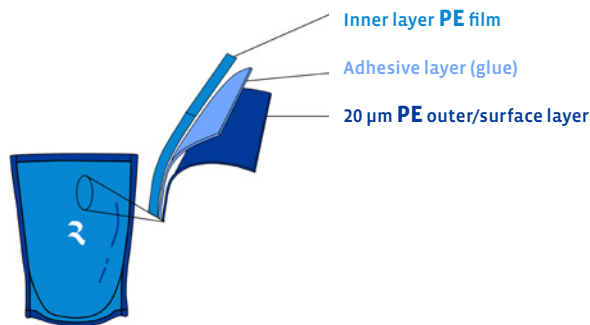
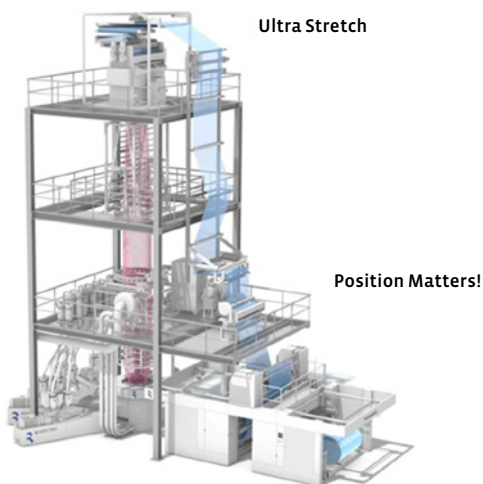
Consumers, major brands and legislators are demanding more sustainable packaging solutions. China, for example, pursues a five-year plan to strengthen the use of recyclable and sustainable packaging. Major suppliers are moving away from the use of disposable plastic: Nestlé, Unilever, Pepsico and Danone – four of the world’s largest food and beverage manufacturers – promise their customers recyclable, compostable or reusable packaging by 2025. The production of All-PE laminates with stretched PE as a substitute for PET films would achieve these goals since mono-material composites are key to functioning recyclability in the packaging industry.

2. Comprehensive know-how package from Reifenhäuser

To produce All-PE films, Reifenhäuser offers a comprehensive and unique know-how package consisting of technology, film formulations and processing parameters developed in close cooperation with partners along the value chain. EVO Ultra Stretch, Reifenhäuser's unique solution for MDO technology (Machine Direction Orientation), provides high process stability through reduced crystallinity, energy savings through higher film temperatures when reaching the MDO, and better film properties (e. g. shrinkage and sealing) through longer post-annealing. EVO Ultra Stretch also enables unblocked films with asymmetrical structures – true to the motto “Position Matters”.

3. Saving energy and material for maximum efficiency

Reifenhäuser technologies not only offer a wide range of product advantages, they also significantly increase production efficiency. They enable material-saving and energy-efficient processing. In addition, Ultra Stretch lines can be used for a wide range of applications, paving the way for rapid adaptation to market needs – for example, by producing breathable films for diapers or medical protective clothing.



Position matters: Conventional MDO units are positioned either on the ground floor between the film winders or on the mezzanine above the winder. The EVO Ultra Stretch is integrated in the take-off. This is the best location for the stretching process, because it is the first position where a film can be stretched. A patented solution from Reifenhäuser.

The advantages:

- Decreased time to MDO: 2.5 times earlier
- More stable process through reduced film crystallinity
- Energy savings through higher entrance film temperatures
- Increased time to winder: 2.5 times longer
- Best film properties through maximum annealing time
- Enable unblocked films
- Maximum converting efficiency: No adaptation on filling machine needed
- Also suitable for breathable films and other hygienic films

A typical application: a mono-material stand-up pouch consisting of All-PE films. A stand-up pouch is a widely used packaging solution. It usually consists of a PE layer on the inside, which is sealed at low temperatures. Typically, it is laminated against reverse printed PET on the outer layer. By replacing the PET with a stretched PE film, the packaging becomes fully recyclable.

The advantages:

- Best in market for PET replacement
- Good mechanical properties and stiffness
- Low shrinkage and easy sealing capability
- Excellent film optics with low haze and high clarity
- Fully recyclable
- Easy to operate