WINDMÖLLER & HÖLSCHER

RECYCLABLE COFFEE STAND-UP POUCH

High Barrier Pouch designed for Recyclability and Packaging Performance

Why a Recyclable High Barrier Pouch?

The recyclable coffee stand-up pouch is an approach to conquering the challenges of sustainability. Most of today's barrier pouches use metallized BoPP or BoPET as a barrier layer and they are generally incinerated after use. The recycling of multi-material laminates is difficult due to the incompatibility of the different materials used. With our stretched MDO PE-film with an EVOH barrier layer in combination with our PE sealing film, we have created a laminate with a total amount of only 2% EVOH. This even exceeds the current recycling regulations and provides the barrier properties for oxygen and water vapor required for this kind of packaging. The barrier properties achieved are comparable to non-recyclable laminates like metallized BoPP/PE or metallized BoPET/PE.

Our partners

TotalEnergies

MITSUBISHI CHEMICAL GROUP
Mitsubishi Chemical Europe

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B&B
THE PACKAGING MACHINERY COMPANY

Your advantages

- Recyclability proven by W&H
- Excellent production efficiency thanks to OPTIFIL P MDO automation
- Proven film concept along the value chain
- Improved barrier properties

Recipes

MDO PE-Film with EVOH

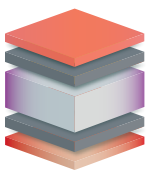
Resins		Layer thickness	Functions
mHDPE	Lumicene	12 µm	Thermal resistance
mLLDPE	Supertough	14.5 µm	Mechanical properties
mMDPE	Supertough	20 µm	Mechanical properties
Tie	Modic	8.5 µm	Bonding
EVOH	Soarnol	5 µm	Oxygen barrier
Tie	Modic	8.5 µm	Bonding
mMDPE	Supertough	28 µm	Mechanical properties
mLLDPE	Supertough	11.5 µm	Mechanical properties
mHDPE	Lumicene	12 µm	Thermal resistance

The primary film thickness is 120 µm and stretched down to a secondary film of 25 µm

BUR: 1:2.36
Output: ~ 740 kg/h

Sealing Film

Amount	Resins		Layer thickness	Functions
90% 10%	mLLDPE LDPE	Lumicene Total LDPE	10 µm	Optical and mechanical properties
100%	mHDPE	Lumicene	12.5 µm	Water vapour barrier
88% 12%	mMDPE MB	Supertough Masterbatch White	40 µm	Stiffness; Colour
100%	mHDPE	Lumicene	12.5 µm	Water vapour barrier
70% 30%	mLLDPE POP	Supertough Plastomer	10 µm	Sealability



BUR: 1:2.0
Output: ~ 520 kg/h
Thickness: 85 µm

Learn more about **RECYCLABLE HIGH BARRIER FILM:**
www.wh.group/int/en/sustainability/circular_economy/recyclable_solutions/coffee_pouch.html

Find more information about **VAREX″ with MDO** on the back of the page.

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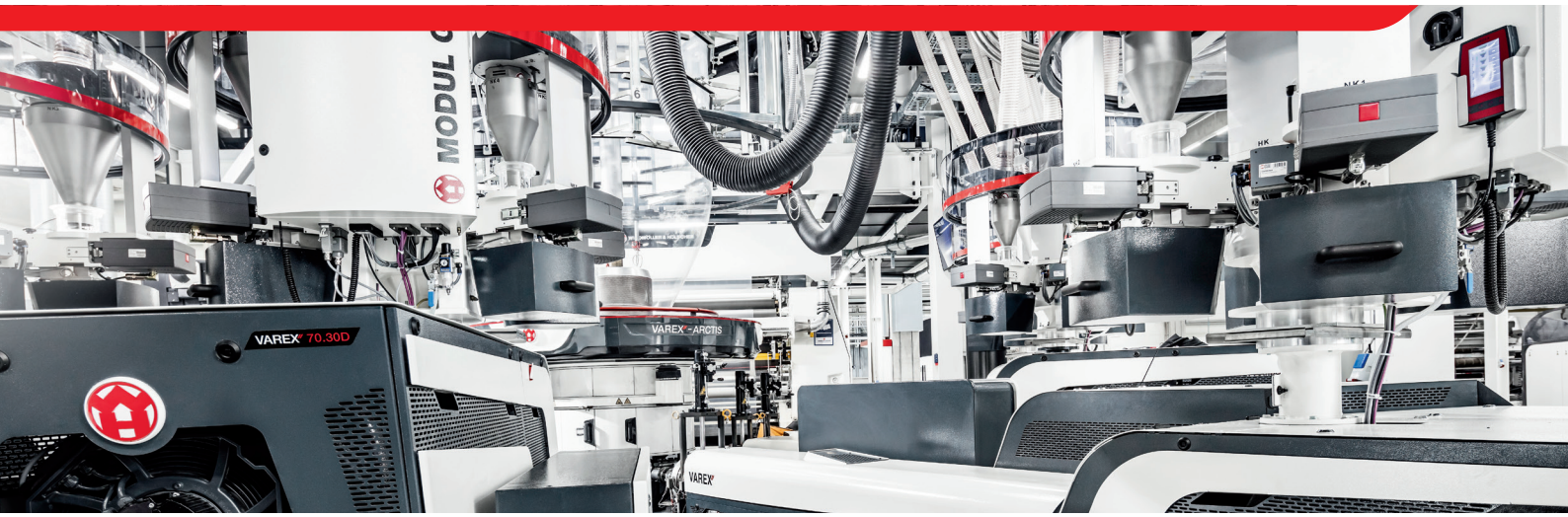
VAREX″ WITH MDO

The Benchmark in Blown Film Extrusion



Why VAREX″ with MDO?

Extruders and Die

Our extruder and die technology provides a perfect melt homogeneity and an excellent melt distribution, which are the keys to the extrusion process. The technology produces films with consistent thickness of all of the individual layers, including that EVOH barrier layer.

Key features are:

- Innovative die and extruder design for perfect melt distribution
- Variable mandrel execution of the MAXICONE die head concept allows you to design a die that matches your film recipes and applications.

MDO

Our MDO PE film is stretched to improve its mechanical and optical properties. W&H MDO technology allows our customers to optimize all process parameters.

- All MDO roller temperatures and speeds can be controlled individually
- Adjustable stretching gap (5 – 60 mm) during production for optimized film properties
- Precise control of stretching process by web tension or stretching speed
- Excellent film flatness despite the stiff nature of the film

Your advantages

- Production efficiency with OPTIFIL P MDO automation
- Extrusion of large variety of materials thanks to the robust and flexible extruder and die design
- Full integration of all W&H machine components
- Printability proven on the HELIOSTAR″ S rotogravure printing press

Technical Data VAREX″	
Line widths	1300 – 3600 mm
Number of film layers	1, 3, 5, 7, 9, 11
Extruder screw diameters	50, 60, 70, 90, 105, 120, 135 mm
Die diameters	160 – 900 mm
Raw materials	Biomaterials, recycling materials, PE, PP, EVOH, PA, ionomers, ...
Winders	FILMATIC″ V (surface/center/gap winder) FILMATIC″ T (double turret winder) FILMATIC″ N (surface/center/gap winder)
Special equipment	Side gussets, water bath, annealing units, MDO, ...

Learn more about **VAREX″ with MDO:**
www.wh.group/int/en/our_products/extrusion/stretching_unit

Find more information about
RECYCLABLE HIGH BARRIER FILM
on the back of the page.

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