

# Barrier Biax Film Lines

## Multi-Bubble Biax Film Production Solutions



### Key Features:

- Versatile extrusion technology can produce films with a variety of barrier resins (EVOH, PA, PVdC)
- Controllable film shrink properties
- Double-bubble systems are available with and without annealing to target specific properties needed
- Stable process that allows for long production runs without bubble breaks

### Why Macro?

- Ideal for high performance multilayer barrier films for food packaging applications such as shrink bags, lidding films and casings.
- The lines are configured to achieve the optimal orientation and shrinkage balance
- Macro's advanced die technology is able to handle a variety of barrier resins such as Nylon, EVOH and PVdC
- Macro's water calibration system is simple to use and ensures that the primary tube is precisely controlled; it allows for adjustments to be made without stopping the line
- Systems can be made with both water-based and IR-based orientation methods to tailor performance based on materials and shrinkage requirements
- Each model is equipped with a gauge randomizing unit prior to winding to ensure high-quality roll production. Final roll creation is performed by Macro's Automax-S surface winder, which features programmable tension tapering and fully automatic cutovers.

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Model	Double-bubble	Double-bubble with annealing (Water)	Double-bubble with annealing (IR)
<b>No. of Layers</b>	5-13	5-13	5-13
<b>Materials</b>	PE, EVOH, EVA PVdC, Ionomers	PE, EVOH, EVA, PVdC PA, Ionomers	PE, PP, PS, PET, EVOH EVA, PA, Ionomers
<b>Film Thickness</b>	30-100 µm	30-100 µm	30-100 µm
<b>Layflat Width</b>	200 – 900 mm	200 – 900 mm	200 – 900 mm
<b>Output Capacity</b>	40 – 200 kg/h	40 – 200 kg/h	40 – 200 kg/h
<b>Production Speed</b>	Up to 150 m/min	Up to 150 m/min	Up to 150 m/min
<b>Orientation Method</b>	Water Heated	Water Heated	Infrared Heaters
<b>Annealing Method</b>	Heated Rollers	Infrared Heaters	Infrared Heaters