

# UNI-FLO Dual-Lip Air Ring



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**Quality:** Brampton Engineering Inc. worldwide headquarters continues to meet the ISO 9001:2000 standard which covers design, manufacture, assembly, installation and service.



The original UNI-FLO Dual-Lip Air Ring has evolved and improved since we first patented it. Today it remains the most advanced technology available in the industry and has proven highly successful on all applications. We invented the technology and we continue to improve it.

The two-stage action of the dual-lip design creates the best possible circumstances for efficient bubble cooling. The UNI-FLO Dual-Lip Air Ring provides

- improved bubble stability especially for processors of low melt strength materials such as nylon, PVC and thick melt LLDPE from large die gaps
- consistent gauge uniformity
- better width control and web flatness
- increased cooling rate for better film optics
- uniform roll geometry
- enhanced blow up ratio range
- user friendly operation
- measurably improved productivity(15 to 21 lbs/in of die circumference, 0.8 kg/mm of die diameter) is common with LPDE and HPDE
- increased productivity resulting in significant energy and operating cost savings.

## **Method of Operation**

The air ring delivers two air streams from a common chamber to the exterior of a blown film bubble with two different objectives. A gentle, tubular primary air stream is applied to pre-cool the fragile melt and stabilize the bubble as it is expanded and drawn upwards along the forming cone. At the top of the forming cone a high velocity, high volume secondary air stream is introduced. This secondary air stream creates a powerful Venturi effect which draws the partially cooled bubble radially outwards to the tip of the forming cone. The drawing action thins the melt stream to improve thermal conductivity. The UNI-FLO Dual-Lip Air Ring provides the main cooling effect on the bubble by means of its high velocity and therefore favourable heat transfer coefficient.

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## Distinguishing Features

- compound Teflon seals eliminate air leaks, improve film uniformity and reduce maintenance
- bronze thread eliminates wear in critical thread area maintaining accuracy over extended life
- advanced chamber design provides precise air distribution and minimizes blower pressure requirements. Latest design requires no baffles or screens
- adjustable upper lip allows fine tuning of the air stream for optimum stability and cooling over the whole range of blow-up ratios and materials.

## Options

- customized lip designs available
- insulation to reduce condensation when using chilling air

## Applications

- all general purpose blown film applications
- especially for low melt strength materials such as nylon, PVC and thick melt LLDPE from large die gaps, mLLDPE
- our customers continually find innovative applications for our tools.

## The Guarantee

Over 1000 UNI-FLO patented dual-lip air rings have been supplied to the blown film industry. Our individual experience coupled with our stringent inspection techniques allows BE to offer a complete and unconditional performance guarantee to our customers.

Our pledge is to supply superior bubble cooling equipment with the highest design technology and craftsmanship. If for any reason we fail to satisfy our customers' requirements, we will accept the return of the equipment with full refund.