

Press Release

The counter flow air ring, a new dimension in film cooling

Kdesign, the expert in film cooling systems from Königswinter, first presented its new air ring concept based on the counter flow principle at Plast 09 in Milan to the trade visitors.

Since the Exhibition this new high-performance air ring has been introduced successfully into the market in a wide range of applications and is being offered as original equipment by the leading extrusion line manufacturers.

The counter flow air ring **KARAT COM3** is height adjustable and consists of three air outlets.

The first air flow which is directed downwards, contrary to the film running direction (counter flow), pre-cools the film's neck, whereas the other two air currents go upwards working like a traditional dual lip air ring.

In comparison with conventional air rings, this new concept achieves a considerably higher line output, and due to the longer neck, improves the mechanical characteristics of the film.



“Line with counter cooling air ring **KARAT COM3**”

With regard to other high-performance air ring systems, such as double air rings, the **COM3** is distinguished by its excellent cooling performance and the following advantages:

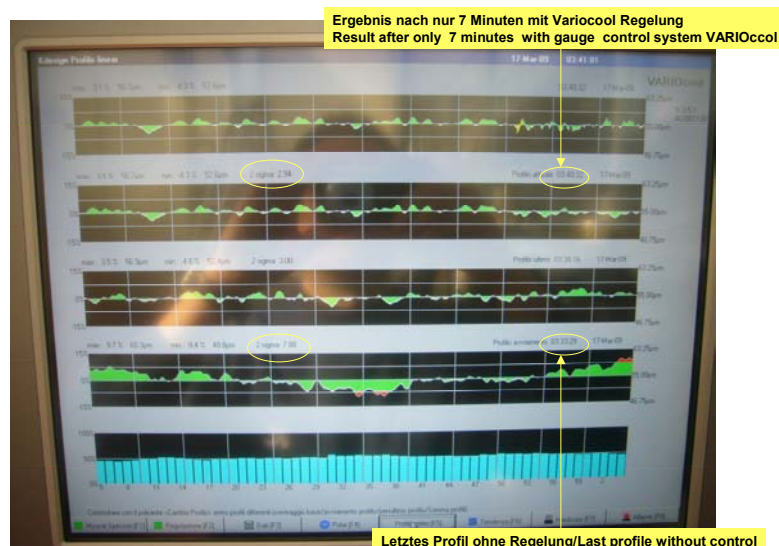
- Easy start-up and therefore less scrap
- Higher bubble stability with easy adjustment
- Wide operational range, comparable to conventional dual lip air rings
- Reduction of wax deposits on the air ring lips
- Low energy consumption related to kg-output

The COM3-counter flow air ring has been proven and tested in almost any blown-film application.

As an example, in “heavy-duty sack” productions an output of 330 – 400 kg/h is reached on a 180mm die, or in laminating film productions 800 - 900 kg/h on a 500mm die. Also, the COM3 is successfully applied in the production of barrier film, stretch hoods and stretch film.

In many applications it is not only the higher output, but also the improved mechanical characteristics of the film, which makes the retrofit of a COM3 air ring a credible and profitable option.

In combination with the patented gauge control system VARIOcool, the thickness profile is reduced quickly and effectively. The VARIOcool system is based on the modification of the cooling air quantity and produces no further thermal energy to the film. It is characterised by a very fast response time in all film applications.



“Monitor gauge control system **VARIOcool**”

The COM3 air ring is an intelligent asset, with a fast return of investment. Even a retrofit to existing lines will lead to a considerable improvement in productivity and quality.

For further information please feel free to contact us.

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