

# Plastics News

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## Addex introduces ICE, ICE baby

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**Düsseldorf, Germany** — Newark, N.Y.-based maker of cooling technologies for blown film extrusion Addex Inc. exhibited two new products at K 2016. Both were air rings featuring the company's Intensive Cooling Experience (ICE) technology.

The first has four cooling elements in a stackable configuration and is intended for OEM applications. The second, smaller, single-cooling element model, ICE-enhanced Dual Flow, is intended for retrofitting to existing blown film lines.

The advantage of both ICE products, over existing cooling units, is that the cooling air is directed both upward and downward, according to Addex President Bob Cree.

Cree said: "Because the two air flows are divergent, they create a low-pressure zone that pulls the film in. By having the film locked at both these cooling elements at the top and at the bottom, we're holding and stabilizing the bubble at multiple locations, all the way up underneath the air ring. Compare that to the competition you see everywhere where they raise the air ring up — and what you find is, that that whole area is unsupported, you can actually see the bubble being corrugated or whatnot. With the ICE system that doesn't happen because we actually support the bubble approximately every 50 mm.

"The airflow is high velocity. And high-velocity relates directly to how efficient the cooling is. Low-velocity air doesn't cool very much. High-velocity air cools a lot better. You have stability as well as output rate."

The decision to deliver ICE in two flavors was a recent one. In fact, the single-cooling element model came about in mid-July 2016 when Addex looked at the potential markets for ICE. The patents for "full blown" ICE were only applied for in January.

Cree explained: "There are two markets for our products. The direct-to-customer, retrofit market and the OEM market. And what we found is that in the retrofit market, generally speaking, the lines people have bought, they don't over-spec the extruders on them. They have a little extra, but not a lot extra. So they have limitations on what kind of output rate they can really deliver. So you might be able to cool it, but if you can't pump it, what's the point?"

"So we realized that, for the retrofit market, we'd need to tone it down a little bit. So we started cutting back on the number of elements, from four, then we went to three, and two, and then, almost by accident, for completeness sake we said, 'Let's try it with just one element,' which simplifies it. It hooks up directly underneath the air ring and takes the air directly from the air ring. What we found shocked us. We got a 15 to 20 percent increase in output rate just by doing that ... we guarantee a 15 percent increase, but what we're actually seeing is 15 to 20 percent."

Addex has been talking to a number of OEMs about implementation of the full-ICE product. Addex cannot yet reveal the names of its partners but expects to start seeing implementation of the product in early to mid 2017.

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