TECH NEWS

HyperFlaker

DIFFERENCE MAKER

Traditional deflakers are a well-known technology. After decades of optimization, the state of the art no longer had much room left for improvement. Put simply, classical deflakers had been around for a long time, and had gotten just about as good as they were going to get.

Then ANDRITZ HyperFlaker technology changed the game. By replacing the traditional, smooth deflaker tooth edges with a revolutionary serrated tooth design, the ANDRITZ HyperFlaker has delivered a wide range of advantages compared with conventional deflakers. This unique design can be installed on almost any model of disc, ring, or conical deflaker (even older units and from any manufacturer). Now that the HyperFlaker has been patented or is patent pending both in the EU and worldwide markets, ANDRITZ is the only place in the world to get these one-of-a-kind deflaker fillings.

Upgrading with HyperFlaker rings transforms the cost, quality, and environmental impact of the deflaking process. This new technology boosts flake shearing and reduces fiber clumps, resulting in a cleaner, more homogenous stock, and requires less energy to obtain a given result. This applies to all broke-handling or chemical/mechanical pulp stock preparation systems across the full range of stock consistencies, whether for coated or uncoated, virgin-fiber, recycled, wet-strength papers or tissue.

Erika Sboarina, Country Manager Paper Service Italy, ANDRITZ and Gianluca Simi, Senior Plant and Process Engineer, Lucart

As deflaker fillings need to be replaced periodically anyway, this new technology can be installed with no extra downtime or expenditure. Many mills have already made the switch, and they report benefits that include big reductions in repulping times, less or even zero use of certain chemicals (e.g., dissociating agents), lower energy use/more production at stable energy use, the ability to use cheaper raw materials, and better optical properties in the finished paper.

So far, so good, then. But with more than 2,000 stock deflakers in operation at paper mills around the world, the industry still has a great deal of additional potential to improve efficiency and product quality, all while reducing its costs and carbon footprint.

SUCCESSFUL HyperFlaker PERFORMANCE AT LUCART PORCARI, ITALY

One of the many customers already enjoying the benefits of the ANDRITZ HyperFlaker is Lucart's tissue and flexible packaging mill in Porcari, Italy.

This fast-growing group has been expanding throughout Europe in recent years, and has demonstrated its forward-thinking principles time and time again. For example, Lucart operates Italy's only mill that recycles Tetra Pak® cartons into paper, it has invested heavily in solar power, and it has been collaborating for several years with the local IMT School for Advanced Studies Lucca on successful research into recycling and reusing paper mill sludge.

Lucart Porcari mill, Italy

It is perhaps unsurprising, then, that Lucart has also switched to HyperFlaker technology at Porcari, thus achieving a clear improvement in product quality on its MG* paper machine PM3.

Erika Sboarina, Country Manager Paper Service Italy at ANDRITZ, explains, "Whenever I walk through the refining room at Lucart Porcari, and I see the HyperFlaker at work, it reminds me that we at ANDRITZ are making our contribution to this mill's many ambitious targets. We never stop looking for engineered solutions that will raise effectiveness and sustainability – it could be a major rebuild, or, as in this case, a patented, new spare part concept. Whether the project is large or small, our passion and dedication are the same." Gianluca Simi, Senior Plant and Process Engineer at Lucart Porcari, sums it up by saying, "Every milestone marks a new beginning: ANDRITZ contributes to this journey, day by day."

The mill received its first set of HyperFlaker fillings in late 2025, and Lucart has since ordered more, not only for Porcari, but for one of the group's other mills, too.

Hand sheet comparison:
left: feed
right: standard
top: HyperFlaker

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* machine glazed