

Feature Article

Recycling & Scrap Reclaim at NPE 2003

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Most of the news to be found at NPE in post-consumer recycling comes from Europe and concerns direct recycling of PET flake into sheet without repelletizing. You'll also see a proliferation of film-reclaim machines that combine a single-shaft shredder and an extruder. The concept was pioneered by [Erema](#) a few years ago.

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Among the exhibitors there will also be plenty of recyclers showing off their services or materials. They include veterans like Phoenix Technologies and United Plastic Recycling, as well as newcomers like New Age Environmental, which both recycles and represents a half-dozen Italian makers of recycling equipment. Another new player is [Resyk](#), which licenses its proprietary compression molding process for mixed plastic waste and will show licensees' products.

PET news from Europe

[Luigi Bandera](#) is introducing a corotating twin-screw extruder for direct extrusion of PET flake into sheet for thermoforming, including two- and three-layer sheets for food-grade packages.

[Erema's](#) recently developed Vacurema system is being used in Europe, Asia, and North America to recycle PET flake directly into sheet for dry-food contact. The flake doesn't have to be predried or crystallized. It is fed directly into a vacuum densifier, then into a vented or nonvented extruder and comes out as pellets, sheet, or fiber. The I.V. gain is as much as 5 or 6 points.

[Starlinger's](#) new Recostar IV extruder, which won't be on display, is a continuous single-screw system that can reclaim PET and raise the I.V. in the process.

[OMV](#) is also developing a five-layer barrier technology in Italy for direct PET recycling into sheet for thermoformed food packaging.

[Gneuss's](#) integrated screen changer and melt pump is also designed to recycle PET flake directly into cast film or sheet.

All-in-one shredder/extruder

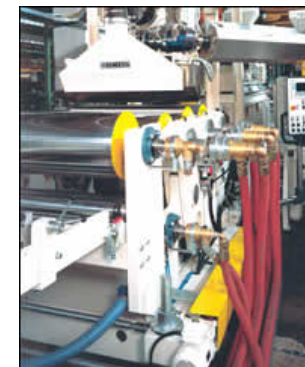
[Erema](#) will show for the first time in North America its Coax 100E system, in which a single drive powers a single-shaft shredder and reclaim extruder. Since Erema introduced the Coax at the K 2001 show in Germany, competitors such as [Artec](#) and [Next Generation Recycling](#) (both of which are exhibiting in Chicago) have followed with variations on the theme.

Most recently, [Starlinger](#), which has expanded heavily into recycling extruders, launched a Recostar model that combines a single-shaft shredder, an agglomerator, and an extruder, but with separate drives. A small Recostar 65 model at NPE will provide the first U.S. demo of [Econ's](#) wear-resistant ceramic pelletizing die.

New chompers

There will be plenty of granulators displayed at NPE, especially small machine-side models to return sprues, runners, and film edge trim directly back into an injection molding or extrusion process. Many of the new granulators feature low rotor speeds that reduce dust and noise.

Look for new entrants in the screenless granulator category following the expiration of a patent on the Scutter granulator from [Nissui](#) in Japan, which closed its doors last year. Scutters are now built by Stolz Co. Ltd. in Japan and represented at NPE by USNI Tech LLC and [Size Reduction Specialists Corp.](#)



Luigi Bandera's new corotating twin-screw extruder with patented venting recycles PET bottle flake into film without drying or crystallizing.

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