

Two Wins, One Film: Biodegradable Film Delivers Energy Savings and Eliminates Plastic Waste in the Packaging Process

pester pac automation reduces packaging process energy consumption by up to 43% with Solutum's biodegradable mono-material film – no machine modifications required

Wolfertschwenden, August 08, 2025 – As one of the leading providers of end-of-line packaging and automation solutions for the pharmaceutical and consumer goods industries, pester pac automation is committed to making packaging processes more sustainable and efficient. In partnership with **Solutum Technologies Ltd.**, the company has developed an innovative mono-material film that is fully biodegradable, leaving behind no microplastics or harmful substances.

This jointly developed film delivers a significant reduction in energy consumption while being fully compatible with existing filmwrapping equipment – a dual win for both production efficiency and sustainability.

Global Reach, Local Impact

The new film meets key requirements for international packaging operations: as a mono-material, it can be used worldwide and is compatible with all waste streams. Even in the event of improper disposal, it biodegrades naturally. This provides maximum flexibility regardless of local waste management infrastructure – a crucial advantage for globally operating pharmaceutical and consumer goods manufacturers.

Another benefit is worldwide availability through local production on conventional extrusion lines. Initial trials conducted with SÜDPACK in Ochsenhausen have been successfully completed. Capacities for both compounding and extrusion are already in place for future production.

“As a driver of innovation in sustainable packaging solutions, we are pleased to contribute to the development of this new film through our pilot extrusion plant,” said Matthias Schrägle, Head of Development at SÜDPACK.

Energy Efficiency as a Key Advantage

Beyond its ecological benefits, the film offers substantial gains in energy efficiency and operating costs. Extensive test runs at pester pac automation demonstrated a reduction in pneumatic energy use by up to 80%. These savings are possible thanks to the film's exceptional heat-sealing properties, which eliminate the need for cooling air.

As a result, overall energy costs are reduced by 43%, avoiding an estimated 12 metric tons of CO₂e* over the average service life of a packaging machine – equivalent to the carbon footprint of a round-trip long-haul flight from Munich to Cape Town.

The new packaging material enables a completely pneumatic-free machine configuration. Until now, compressed air required for cooling had been a limiting factor in achieving fully electric machine operation.

*(*Assumptions: Service life 16 years, 4,000 machine hours/year, German electricity mix 363*

Sustainability That Drives Value

Thanks to its high mechanical stability, the film allows for reduced material thickness without compromising product or process safety. Packaging managers thus benefit from a sustainable solution that requires no process changes while improving both the environmental and energy footprint of production.

In line with the EU Packaging and Packaging Waste Regulation (PPWR) goals for reducing plastic waste, the Solutum film sets a benchmark: it offers versatile end-of-life options combined with a significant reduction in raw material usage. Its high tear resistance enables the use of much thinner gauges – in initial applications, thickness has already been reduced from 40 µm to 25 µm, with further optimization potential ahead.

Overall, this material innovation demonstrates that advances in packaging sustainability can go hand in hand with improvements in total line energy efficiency – delivering a double benefit for both environmental performance and operational economics.

Where to See it - Event@Fachpack 2025

pester pac automation will showcase the innovation at Fachpack 2025 during an Expert Talk on September 25, 2025, 11:00–11:30 AM

Topic: *Two Wins, One Film: How biodegradable film saves energy and avoids plastic waste in packaging automation*

Fachpack Hall 1, Booth 1-141

Speakers:

- **Sharon Barak**, President & Founder Solutum Technologies Ltd.
- **Sebastian Pauleit**, Sustainability Manager pester pac automation GmbH
- **Michael Aurbacher**, Senior Product Manager pester pac automation GmbH

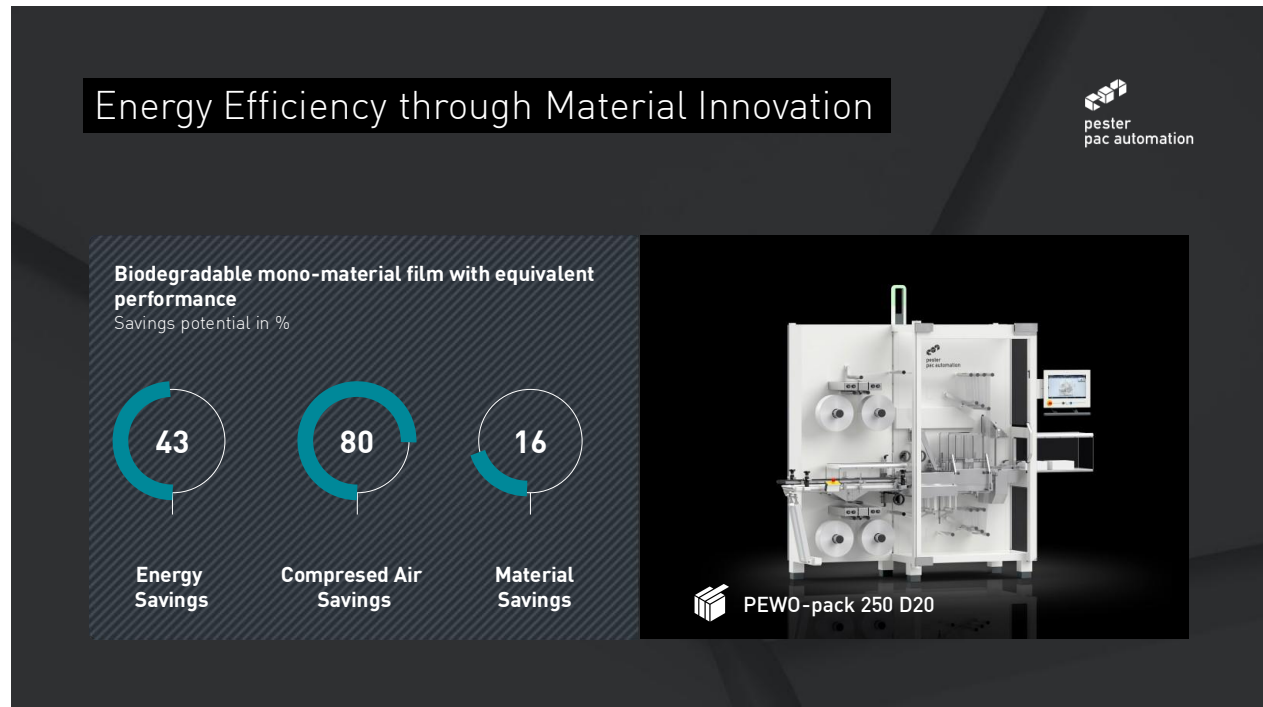
Statements

The market is increasingly demanding sustainable packaging solutions – and with this material, we are improving several key factors at once: environmental impact, energy efficiency, and material usage. This is a true step forward for our customers, the environment, and production as a whole.”

(Joachim Eckart, Director Sales, pester pac automation GmbH

“At Solutum, we started with a clear mission: to Eliminate Plastic Waste. For Good. But real innovation doesn’t stop at solving a single problem. Along the way, we discovered that by rethinking materials from the ground up, we could also address hidden challenges- like energy consumption during production. Sustainability, for Solutum, means solving more by looking deeper.” (Sharon Barak, President & Founder Solutum Technologies Ltd.)

Image Gallery



Unternehmensprofil

pester pac automation GmbH

pester pac automation is a leading provider of end-of-line packaging and automation solutions for the pharmaceutical and consumer goods industries. Headquartered in Wolfertschwenden, Germany, the company has been developing innovative machinery and automation concepts for over 50 years in the areas of film wrapping, cartoning, and palletizing. More than 9,000 systems are currently in operation worldwide.

With eight subsidiaries and around 1,000 employees globally, pester maintains a strong international presence – with a focus on efficiency, future readiness, and sustainability.

For more information, visit: www.pester.com

Solutum Technologies Ltd.

Solutum is a cleantech company based in Tel Aviv, specializing in the development of innovative, biodegradable packaging solutions. It offers one of the most versatile end-of-life solutions—effective in both controlled and uncontrolled disposal environments. Solutum's patented material was developed from the ground up, made from readily available raw materials, and is compatible with existing standard processing systems—providing a practical and impactful response to the global plastic waste problem.

For more details: www.solutum.co

Media Contact

pester pac automation GmbH
Sabine Gaus
Corporate Communication
Hauptstr. 50
87787 Wolfertschwenden
Germany
E-Mail: sabine-gaus@pester.com
phone: +49 8334 607-297
www.pester.com