

## Press release

### **Recycling innovation lowers melt temperature and saves energy EREMA presents DuaFil<sup>®</sup> Compact technology at NPE**

**Due to their properties, household waste, supermarket film, agricultural film and input materials from similar sources place high demands on the recycling process. The quality of the recycled pellets depends largely on the gentle treatment of the melt and the effective removal of impurities. To meet these kinds of challenges, EREMA has developed the new INTAREMA<sup>®</sup> TVEplus<sup>®</sup> DuaFil<sup>®</sup> Compact. The recycling machine manufacturer is presenting the system at NPE from May 6 to 10, 2024. Another highlight: ReFresher technology for odor-optimized and food-safe recycled polyolefin pellets has now reached a total capacity of one million tons per year worldwide.**

Ansfelden, April 30, 2024 - "The potential for plastics recycling on the American market is enormous," says Robert Wahlmüller, CEO of EREMA North America in the run-up to NPE 2024. "Our order books are well filled and we have a promising outlook for the new financial year that has just started". At its trade show stand, the company is placing a special focus on the INTAREMA<sup>®</sup> series, underlining EREMA's broad offering for the post consumer sector. First launched at the K 2022 trade fair in Düsseldorf, the INTAREMA<sup>®</sup> TVEplus<sup>®</sup> DuaFil<sup>®</sup> Compact double filtration system is the industry benchmark for recycling challenging materials with high levels of contamination and moisture, such as film waste with paper labels from commercial waste, agricultural film and washed film from household waste. "The INTAREMA<sup>®</sup> TVEplus<sup>®</sup> DuaFil<sup>®</sup> Compact is our energy-saving innovation featuring safe and particularly high performance degassing and filtration. Now we are demonstrating live this high-throughput, compact system to the American public at NPE 2024," says Wahlmüller.

A key feature of the machine is the consistently gentle treatment of the melt throughout the entire process. This is the result of combining the TVEplus<sup>®</sup> system with the new DuaFil Compact technology. Thanks to the compact configuration of the machine, the extruder screw is 10 L/D (length-to-diameter ratio) shorter compared to the previous EREMA double filtration solution, and there is no longer a need for the discharge metering zone. The melt is processed more gently overall, also because a dedicated melt pump is used to increase the pressure upstream of the second filtration unit. "Our DuaFil<sup>®</sup> Compact technology decouples pressure and temperature build-up, which reduces the overall melt temperature so that it reaches its highest temperature in the "plus zone" of the extruder prior to degassing," explains Clemens Kitzberger, Business

Development Manager of Post Consumer Applications at the EREMA Group. This increases the degassing volume by up to 33 percent, while at the same time reducing retention time and energy consumption. "This new development is based on feedback from the market, including from American customers," emphasizes Kitzberger.

When recycling DSD 323-2 (flexible PE and PP household waste), for example, the new INTAREMA® 1108 TVEplus® DuaFil® Compact reaches a melt temperature upstream of the second filter unit that is around 22 degrees Celsius lower, with around 11 percent lower specific energy consumption (kWh/kg) and around 14 percent higher throughput compared to the previous EREMA solution.

### **INTAREMA® TVEplus® DuaFil® Compact in action in Chile**

Since K 2022, EREMA has sold around 20 INTAREMA® TVEplus® DuaFil® Compact systems. The first machines have been delivered and have now entered operation. At RECUPAC S.A., for example, a recycling and waste disposal company based in Chile.

"As the business unit for waste management at Coipsa, a group of packaging companies in Chile that are fully integrated in all phases of the circular economy, we process more than 150,000 tons of different materials every year," says Philippe Morizon, General Manager at RECUPAC. Plastics recycling is a relatively new field for the company. For their first machine, they decided on an INTAREMA® 1512 TVEplus® DuaFil® Compact. The objective is to produce high-quality recycled pellets suitable for making film. "Our customers have very high quality specifications, which is why we chose an EREMA machine," emphasizes Morizon. "With this compact recycling machine, we can produce high-quality pellets that are used to make film and can be used for other applications in the packaging sector. There were many arguments in favour of this machine, including its high overall efficiency. Particularly important factors were its low energy consumption and high degree of automation, which saves on operating personnel. I am confident we will meet our customers' expectations, and the initial results are very promising."

RECUPAC also operates a Lindner washing system. In August last year, EREMA Group joined forces with the waste management specialist and founded a new holding company. The two companies want to work together to increase the energy efficiency of the overall process and further improve recycle quality through technical cooperation.

### **EREMA makes it possible to recycle challenging film waste**

Recycling film, especially supermarket film (98/2), is well established in North America and is also gaining importance in South America. Thanks to the gentle polymer processing and high filtration performance of INTAREMA® TVEplus® DuaFil® Compact technology, the recyclates produced are perfect for reusing in films. EREMA achieves a recycled content of 30 percent for stretch film with a thickness of 8 micrometres (µm) and 50 percent for shrink film.

An application that is currently growing in the USA is the recycling of agricultural film. The producers receive film after it has been used, recycle it, and return it to production. The demand for technologies for processing heavily printed films is also increasing. Both applications are challenging: agricultural film is typically heavily contaminated with sand, stones and organic matter, and printing inks often enter the material being recycled during the melting process. The INTAREMA® TVEplus® DuaFil® Compact provides the high degassing performance required to achieve excellent results using a very efficient process. When recycling agricultural film, for example, EREMA has been able to save 20 degrees Celsius in the melt temperature and 9 percent in energy consumption. At the same time, throughput increased by 11 percent.

### **Odor-optimized and food-safe polyolefins reach one million tons a year**

EREMA launched the ReFresher for producing odor-optimized recycled pellets at K 2016. There are now ReFreshers in operation worldwide for film and regrind applications with a total capacity of 1,000,000 tons per year. Combined with the INTAREMA® TVEplus®, the anti-odor system opens up completely new application possibilities for recyclates, such as high-quality end products for the home, automotive and lifestyle sectors, and for processing food-safe polyolefin recycled pellets (HDPE, LDPE and PP). The process has been classified by an American food safety authority as suitable for feeding the recyclate back into the production of food packaging.

### **EREMA bottle-to-bottle recycling: large-scale systems from a single source**

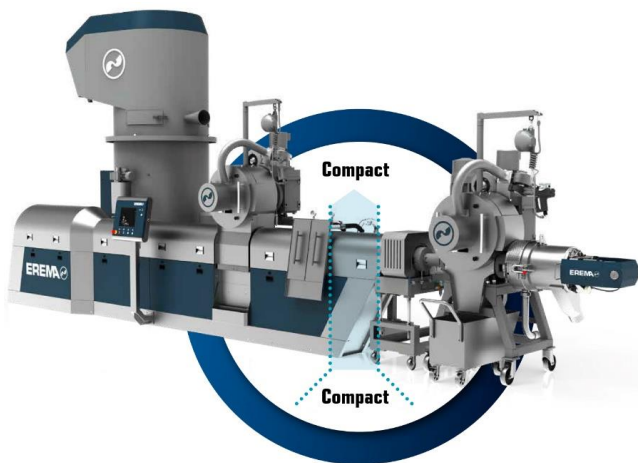
With its VACUREMA® and VACUNITE® systems, EREMA also offers the right solution for the production of food-safe rPET pellets. "Think big and safe - that's the message to our bottle-to-bottle recycling customers," says Christoph Wöss, Business Development Manager for bottle applications at the EREMA Group. In this connection, he points out that customers can now obtain complete systems including SSP post-treatment directly from EREMA, that can process up to 12,100 pounds (5,500 kilograms) of food-safe rPET pellets per hour.

### More space for customer trials in the extended technical center

This spring, EREMA North America opened its extended customer technology center. The center has around 20,000 square feet and is equipped with new machines. "In the technical center at our site in Ipswich, we offer our customers the opportunity to try out and test products and technologies in a process environment," explains Robert Wahlmüller. The technical center is equipped with an INTAREMA® TVEplus® DuaFil Compact® and a ReFresher. Customers can also trial the mobile ReFresher directly at their production facilities. There is also an INTAREMA® K for film edge trim and off-spec material as well as a versatile R&D machine that can be used for trials in the INTAREMA® T, TE and TVEplus® configurations with laser filter and back-flush filter and various pelletizing methods for different applications. A team of process technicians is on-hand to assist during trials. "We demonstrate how to use the machines so customers can find out which solution is best suited to their material," says Wahlmüller. On average, two sets of trials are carried out every week.

Visit EREMA at NPE: [West Hall, Stand: W4471](#)

### Photos:



The new INTAREMA® TVEplus® DuaFil® Compact is significantly shorter than the previous EREMA double filtration solution. This pioneering recycling technology handles the melt gently and saves melt temperature and energy.



Robert Wahlmüller, CEO EREMA North America, is delighted about the opening of the extended technical center: "We can now offer our customers an even more extensive test environment to demonstrate our machines and technologies."

Photo credits: EREMA GmbH

#### **EREMA Engineering Recycling Maschinen und Anlagen GmbH**

Since its founding in 1983, EREMA Engineering Recycling Maschinen und Anlagen Ges.m.b.H has specialised in the development and production of plastics recycling systems and technologies for the plastics processing industry and is regarded as the global market and innovation leader in these sectors. The company is part of the Austrian group of companies EREMA Group GmbH based in Ansfelden/Linz, which employs around 900 people worldwide.

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