

## SIPA MAKES A STRAIGHT LINE FOR THE CIRCULAR ECONOMY

**REDUCE  
REUSE  
RECYCLE**



Plastics packaging is at a critical point in its history. Never before has there been so much talk about reducing or even ending the use of plastics for packaging foods and drinks. Within the industry, we all know that these materials offer major benefits with their abilities to keep foods fresh, reduce energy consumption in transport and handling, and improve safety. But graphic images that demonstrate the results of the irresponsible and unthinking disposal of plastics packaging – massive floating islands of plastics in our seas, despoiled beaches and countrysides, suffering wildlife and so on - are leading to a public backlash.

Nostalgia is building for the days when rigid packaging was all glass and metal and some supermarkets are already introducing what they term “plastics-free” aisles. There is something of an “out of sight, out of mind” element to this attitude of course: metal and glass packaging is also dumped, but in our oceans it virtually all sinks to the bottom. Legislation is also changing the landscape. The European Commission says its first-ever European Strategy for Plastics in a Circular Economy, adopted at the beginning of this year, will transform the way plastic products are designed, used, produced and recycled in the EU. “It will deliver greater added value for a more competitive, resilient plastics industry,” the Commission says. “Better design

of plastic products, higher plastic waste recycling rates, more and better quality recyclates will help boosting the market for recycled plastics.” Under the new plans, all plastic packaging on the EU market will be recyclable by 2030 and the consumption of single-use plastics will be reduced.

Trying to keep ahead of the game, at the World Economic Forum in Davos in January, 40 of the world’s biggest companies agreed to come up with cleaner ways to make and consume plastic. Companies including Unilever and Procter and Gamble made a commitment to increase recycling and cut back overall use, with Unilever saying it would ensure that all of its plastic packaging is fully reusable, recyclable or compostable by 2025. At the same meeting, the Ellen MacArthur Foundation awarded \$1 million to five new recyclable and compostable flexible packaging solutions intended to stop plastics becoming waste.

Today though, too much of the circular economy is still theory. Many of its concepts are largely untried. Only by putting them into practice will we find out how



**REUSE**



realistic they are and how they can be improved for real-life situations. SIPA can stand proud in this regard. For a long time, the company has been working, alone and with partners, to develop PET container production technologies and product designs that minimize the use of materials as well as energy and other utilities. It is also putting its own house in order.

#### LEADING THE WAY WITH XTREME RENEW

SIPA last November signed an agreement with the Italian Ministry for the Environment for the reduction of emissions and the improvement of energy

efficiency within its own production operations. Under the agreement, SIPA will analyse and enhance the sustainability of all its operations, identifying procedures for environmental management of products and processes using life cycle assessment and the identification of measure for further improvement and optimization measures in accordance with ISO 14040 standards.

SIPA is the first company in its sector to engage in a complete and coherent project for the reduction of its environmental footprint. Says Gianfranco Zoppas, president of SIPA owner Zoppas Industries: "This is a confirmation of our commitment to combine environmental sustainability and economic development. We firmly believe that manufacturers can help deliver a better world to future generations."

#### BOTTLE-TO-BOTTLE

The agreement stems from the recent introduction of XTREME Renew, the world's first integrated system for the production of preforms containing 100% of recycled PET, but with the same quality as preforms made from virgin PET.

XTREME Renew was developed in collaboration with EREMA, the Austrian company specializing in plastics recycling technologies. "XTREME Renew allows to put in place the principles of the circular economy," says Zoppas.

XTREME Renew is the synergistic combination of two already successful innovations - Erema's Vacurema and XTREME from SIPA. Compared with alternative systems for recycling old PET bottles back into new ones, it uses less energy, creates less CO<sub>2</sub>, and costs less to run. A key reason for this is that the XTREME unit can process PET directly from the Vacurema recycling system in flake form. There is no need to transform the recycled material into granules that would otherwise have to be cooled and then reheated.

Vacurema makes use of innovative technology to produce recycled PET (rPET) flakes that are exceptionally clean and ideal for food and beverage containers. In a fully integrated, fully automated, continuous process, output is then fed directly to SIPA's revolutionary XTREME rotary injection-compression platform for

producing lightweight preforms at high speed and with high efficiency. The preforms can be as much as 10% lighter than preforms made on traditional injection molding systems. The XTREME system is not alone among SIPA technologies in being able to process recycled PET material. The XFORM system for producing preforms using more conventional injection molding can run with 100% rPET. XFORM is well-known for its high level of energy-efficiency as well as its ruggedness and versatility in being able to accept legacy molds from all major suppliers.

#### BRINGING BACK MORE POST-CONSUMER PET

PET packaging is already more sustainable than many other forms of packaging, but the situation can always be improved. On the supply side, increasing amounts of PET polymer are coming from renewable resources. We need to increase the rate of post-consumer recovery and recycling as well.

Today, more PET is recycled in Europe than any other plastic. According to Petcore Europe, the association representing the

complete PET value chain in Europe, close to 70 billion PET bottles are collected and recycled every year - that's close to 60% of all PET bottles produced. But more can be done, and indeed Petcore and other groups are involved in projects around the world to make it happen.

There are so many ways that PET can be given a life that extends well beyond a single use as a bottle for water, or juice, or oil - however important and beneficial that use is. The global throw-away culture must be broken. SIPA is playing its part to break it.

