

CAREFORMANCE: EREMA revolutionises the plastics industry with Recycling 4.0

EREMA presents the first smart factory package in the plastics recycling industry at the K show: CAREFORMANCE. This technical breakthrough enables the digital integration of recycling processes in the ongoing production process, the global interconnection of entire plant locations and, last but not least, documented quality of the recyclates at the press of a button. In combination with the new webshop for spare parts – Spare Parts Online – the business model of recycling has never been so smart.

Düsseldorf, 20 October – Building on the high degree of automation of INTAREMA technology, EREMA has for the first time developed online measuring equipment and digital analysis and evaluation tools which revolutionise the recycling process. "Trade fair visitors will experience Recycling 4.0 live in the 480 m² CAREFORMANCE Recycling Centre in the outdoor area FG 09.1. Here you will find an INTAREMA TVEplus 1108 with integrated Laserfilter which will be recycling some of the plastic waste from the K show live on site. The machine, quality and process data will be transferred in real time to the EREMA booth in Hall 9, Stand C05," says Manfred Hackl, CEO EREMA Group. Besides **CAREFORMANCE**, EREMA will also be presenting significant new developments in recycling technology.

One highlight, especially for people interested in PET, is the new recycling system **XTREME RENEW** which EREMA has developed together with SIPA of Italy, the leading manufacturer of PET packaging solutions. This accomplishment enables the direct and flexible processing of washed PET flakes to make preforms, signalling the dawn of a new era in PET recycling. Trade fair visitors from the post-consumer sector, on the other hand, will be able to judge the convincing benefits of the **RegrindPro** system for the recycling of regrind material. The advantage over conventional systems: a short extruder screw is enough to melt the already dry and thoroughly warmed regrind particles. The new **RegrindPro** is particularly convincing in respect of the flexibility of the input materials: PE, PP, ABS, PS or other regrind types can be processed without changing screws. The new **ReFresher** will also be of interest to the post-consumer sector. This enables you to considerably reduce the – in some cases intensive – odour development in the production of polyolefin pellets. In the field of inhouse recycling, visitors to the show will see the new, direct flow filter **SW Direct Flow** for minimised contaminants.

CAREFORMANCE – the smart factory package from EREMA

- **INTAREMA plant technology**

At the previous K show in 2013 EREMA launched a system with new core technology and additional innovations: INTAREMA. The primary innovation is based on Counter Current technology. INTAREMA achieves unrivalled process stability while maintaining flexibility with extremely easy operation and considerably less energy consumption. This stability enables automation processes such as Smart Start or the Recipe Management System, which in turn form the basis for modern Industry 4.0 applications. The new smart applications are the ideal addition to the remote maintenance between customers and EREMA which has been tried and tested over many years.

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Throughout the world, 5,000 EREMA systems produce some 14 million tonnes of plastics pellets every year. Since the technology was launched in autumn 2013 more than 500 INTAREMA systems have been sold.

- **QualityOn package**

In addition to the previous machine data, specially integrated sensors – the QualityOn package – can be used in future to record and evaluate MVR (Melt Volume-Flow Rate) and colour directly at the machine. The QualityOn package enables recyclers and producers to make their recyclates with consistent quality in accordance with the special requirements of their customers and document the recyclates transparently using online data acquisition and analysis. As soon as the values measured leave the defined tolerance range this is reported automatically. Nonconforming material can be diverted away immediately from the ongoing process. The colour sensor is flexible and suitable for cylindrical, disk and spherical shaped recyclate. The precise measuring of the recyclate colour takes place directly at the machine. The online spectrophotometer detects the slightest differences in colour which are not visible to the human eye.

The online measuring of melt volume-flow rate (MVR) takes place likewise directly at the machine. Unlike well-known online viscosity measuring systems which use gear pump technology and are designed primarily for clean polymers in the virgin material sector, the MVR measuring unit is designed especially for the higher requirements of recycling processes. It is, for example, insensitive to extremely small contaminant particles of 100-1,000 µm which are common in post-consumer recycling.

- **re360**

In order to make use of the vast amount of machine, quality and process data in a worthwhile and user-friendly way, EREMA has developed a sophisticated MES (Manufacturing Execution System). re360 is designed not only for EREMA recycling machines but also for film and other production machines in the plastics sector. The system makes sense with just one machine but can also interconnect two or dozens of recycling and/or production facilities around the world. This gives companies who operate on an international scale in particular the benefit of data and production transparency. re360 provides an overview of the capacities/stoppage times of the systems for management, documents key quality data of the recyclates for the location manager and informs the operator about upcoming maintenance jobs. The individual re360 modules are linked to the individual customer order and this ensures constant, customer-specific recyclate quality.

- **Spare Parts Online**

The extent to which re360 was developed with customer requirements in mind becomes clear with the link to Spare Parts Online, EREMA's online webshop. Any upcoming maintenance work and the replacement of individual parts is displayed in good time by re360. Spare parts can be ordered directly via the online webshop to keep downtime as low as possible. Whether it is typical spare parts such as heating bands, Laserfilter screen discs and cutting knife sets or long-lasting components such as motors or screws – in the new EREMA webshop you can order over 160,000 items at the press of a button. The customers' respective EREMA systems and previous orders are stored at Spare Parts Online.

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Foto: Manfred Hackl, CEO EREMA Group

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EREMA Group

The EREMA Group comprises EREMA, 3S, PURE LOOP (January 2015) and UMAC (beginning of 2016). With companies in the USA, China and Russia plus around 50 local representatives in all five continents, the EREMA Group has a reliable network to realise customised recycling solutions for international customers. Around 480 people around the world now work for the Austrian company group which is headquartered in Ansfelden near Linz.

EREMA Group in figures:

- 5,000** EREMA systems in operation around the world
- 480** employees in all 5 continents
- 132** million EUR turnover in fiscal year 2015/16
- 50** EREMA country representatives worldwide
- 14** million tonnes of plastic recycled every year with EREMA systems
- 13** facilities for customer test runs at the international EREMA trial centres
- 10** regional centres around the globe to provide customers with direct technical support

For further information please contact

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