English

ecoSAVE®

COREMA®

Recycling & compounding in a single processing step

CHOOSE THE NUMBER ONE.

EREMA®
PLASTIC RECYCLING SYSTEMS

COREMA®

Customised plastic recyclate from inexpensive recycling raw material.

When recycling plastics from in-house or post consumer waste there are inevitably quality fluctuations which often limit the amount of recyclate in the end product. The solution lies in systematic **upcycling**, i.e. the combination of recycling and compounding. This enables you to optimise the property profile with precision according to your requirements.

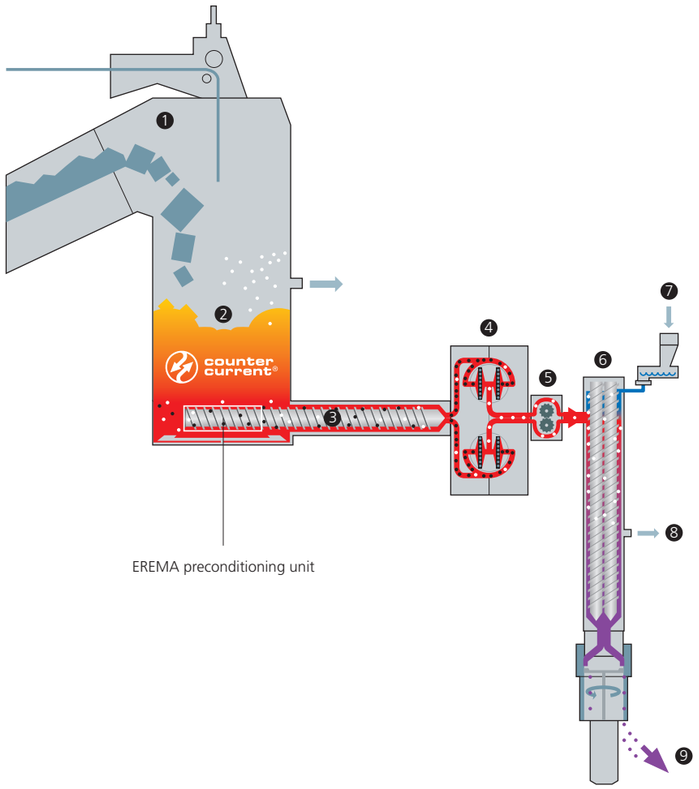
COREMA® brings together all the benefits of recycling and compounding in one system for the first time. The proven, robust EREMA technology is used to turn recycling raw material (e.g. PP nonwoven, PE edge trim, PA fibres etc.) into a filtered melt which then goes directly to a co-rotating twin-screw extruder from Coperion. With its excellent mixing and gas removal properties, this part of the system can handle all compounding tasks.

Besides the dosing of a **wide variety of additives, fillers and reinforcing agents** can be admixed in doses that are higher than those previously possible with EREMA recycling systems. The result is **customised plastic recyclate for high-quality applications.**

ecoSAVE®

- **Lower specific energy requirements** thanks to a complete package featuring design and process engineering measures
- **Lower production costs** through optimised control technology and high-quality, energy-efficient components such as high-performance motors
- Additionally, the practical **energy display** on your operating panel gives you a constant overview of energy consumption at all times, thus enabling you to take specific measures to optimise consumption
- **Reduced CO_2 emissions –** an important contribution to environmental protection

ecoSAVE®



EREMA preconditioning unit

How it works

Feeding ❶ is automatic according to customer requirements. In the patented **preconditioning unit** ❷ the material is cut, mixed, heated, dried, degassed, densified and buffered.

Next, the tangentially connected extruder is filled continuously with hot, pre-compacted material. In the **extruder screw** ❸ the material is plasticised, homogenised and then cleaned in the **fully automatic self-cleaning filter** ❹.

The prepared and cleaned melt then goes via the **melt pump** ❺ directly to the co-rotating, self-cleaning **twin-screw extruder** ❻ from Coperion. With its excellent mixing and gas removal properties, this **flexible** part of the system can handle **all compounding tasks**.

Besides the dosing of a wide variety of **additives**, high amounts of **fillers and reinforcing agents** ❼ can be admixed. In the **degassing zone** ❽ the compounded melt is degassed and moves to the respective **tool** ❾ (e.g. EREMA hot die face pelletising system).

❷ Centrepiece preconditioning unit.

The dynamically controlled preconditioning unit. For an end product in consistently high quality.

cuts · homogenises · heats · dries · compacts · buffers · doses

Technical benefits

- **Possible to use a wide range of recycling raw materials flexibly** thanks to the patented large EREMA preconditioning unit and Counter Current technology
- **Proven, robust EREMA technology** to provide filtered melt
- **Minimum thermal stress** through short, defined dwell times and direct dosing of the melt in the twin-screw-compounding-extruder
- **Proven EREMA degassing technology** with the EREMA preconditioning unit and extruder degassing
- **Central user interface** to control the whole system

Economic benefits

- **Increased value added thanks to the use of inexpensive raw materials** (e.g. PP nonwoven, PE edge trim, PA fibres etc.)
- **Very low operating costs** and minimal specific energy costs through direct dosing of the filtered melt and processing in a single step without intermediate cooling
- **Modular system concept** offers optimum adjustment to the respective application
- **Reliable production** thanks to Counter Current technology and robust design
- **Compact, space-saving design**
- **ecoSAVE® reduces energy consumption by up to 12 %** as well as production costs and CO_2 emissions as a result

Upcycling with COREMA®

EREMA Recycling

EREMA preconditioning unit: cutting, mixing, preheating, drying, degassing, compacting, buffering

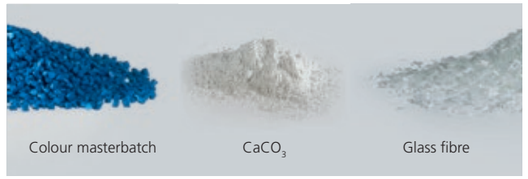
EREMA recycling extruder: plasticising, homogenising

EREMA melt filter: fully automatic and self-cleaning

Examples of raw recycling materials

coperion Compounding

Coperion twin-screw compounding extruder:
- Admixing of additives, fillers and reinforcing agents e.g. up to 80 % $CaCO_3$, 50 % glass fibre, colour masterbatch
- Degassing



Examples of additives, fillers and reinforcing agents suitable for admixing

EREMA Pelletising

EREMA pelletising systems:
- For consistent pellet quality

One control system for the entire plant

Technical data COREMA®

COREMA® systems can be configured for outputs ranging from 300 kg/h to 4,000 kg/h in a wide variety of versions according to the application and specification of the recyclate.

Model	Output capacity in kg/h*	
COREMA 1108 T 50	Recycling of PP nonwoven and compounding with alloy materials and mineral fillers (e.g. EPDM and talc)	max. 500
COREMA 1514 T 65	Recycling of PA fibres and compounding with reinforcing agents (e.g. glass fibre)	max. 1000
COREMA 1721 T 96	Recycling of PE films and compounding with mineral fillers (e.g. $CaCO_3$)	> 3000

* Depending on material properties of the polymer (moisture content, print, degree of contamination, etc.) type and properties of the filling/reinforcing agent and the degree of filling

Headquarters & Production Facilities
EREMA Engineering Recycling
Maschinen und Anlagen Ges.m.b.H.
Unterfeldstrasse 3 / 4052 Ansfelden / Austria
Phone: +43 (0)732/31 90-0
erema@erema.at / www.erema.com

For worldwide subsidiaries and representatives please visit www.erema.com

03/22

https://www.erema.com/en/download_center/

CHOOSE THE NUMBER ONE.

EREMA®
PLASTIC RECYCLING SYSTEMS