

Recycling system with high-performance degassing
for thermoplastics

TVEplus[®]



**NEW
PATENT**
pending

We know how.



Washed PE film flakes



Heavily printed PE, PP film



PP film with paper contamination



Metallised BOPP film



Examples of materials that can be processed

TVEplus® - filtration, homogenisation and degassing at its best

The TVE extruder system has set new standards in filtration, homogenisation and degassing performance with plastic melts through the patented design of the melt filtration upstream of the extruder degassing stage.

This basic principle has also been maintained with TVEplus (patent pending). Thanks to **special design and process engineering measures, performance** has now been optimised even further. The TVEplus unites high-performance degassing, thorough melt homogenisation and the possibility to achieve ultra-fine filtration.

Technical benefits

- NEW** Enhanced filter performance thanks to reduced shearing upstream of the melt filter
- NEW** Optimised triple degassing with the patented EREMA cutter compactor, optimum screw design and extruder degassing ensure highly effective degassing of the filtered melt
- NEW** Higher homogenisation efficiency downstream of filtration and upstream of degassing enhances the subsequent degassing performance and improves the characteristics of the melt
- NEW** Innovative, patented additional technologies for the EREMA cutter compactor – DD system and air flush module widen the scope of application (optional)

Economic benefits

- NEW** High-quality end product even with materials that are difficult to process such as heavily printed films and/or very moist materials. End products can contain a considerably higher share of recycled pellets.
- NEW** ecoSAVE® reduces energy consumption by up to 10% as well as production costs and CO₂ emissions as a result
 - › Considerably higher outputs with the same screw diameter compared to conventional degassing extruders
 - › Compact, space-saving design



Optimised triple degassing

- › Initial **degassing in the EREMA cutter compactor** takes place through preheating and predrying the material
- › The optimum screw design - tuned to the material to be processed - enables **reverse degassing in the cutter compactor**, thus relieving the degassing zone of the extruder
- › Gas inclusions in the melt are removed in the **degassing zone**
- › Only **thoroughly melted, filtered and homogenised material** can pass the degassing zone of the extruder



How it works

Feeding ① is automatic according to customer requirements. In the patented **cutter compactor ②** the material is cut, mixed, heated, dried, densified and buffered.

The tangentially connected extruder is filled continuously. In the **extruder screw ③** the material is plasticised and degassed in reverse. At the end of the plasticising zone the melt is directed out of the extruder, cleaned in the **fully automatic, self-cleaning filter ④** and returned to the extruder again.

The final **homogenisation of the melt ⑤** takes place after the melt filter. In the subsequent **degassing zone ⑥** the filtered and homogenised material is degassed. The melt is conveyed by the following **metering zone ⑦** to the respective **tool ⑧** (e.g. pelletiser) at extremely low pressure levels.

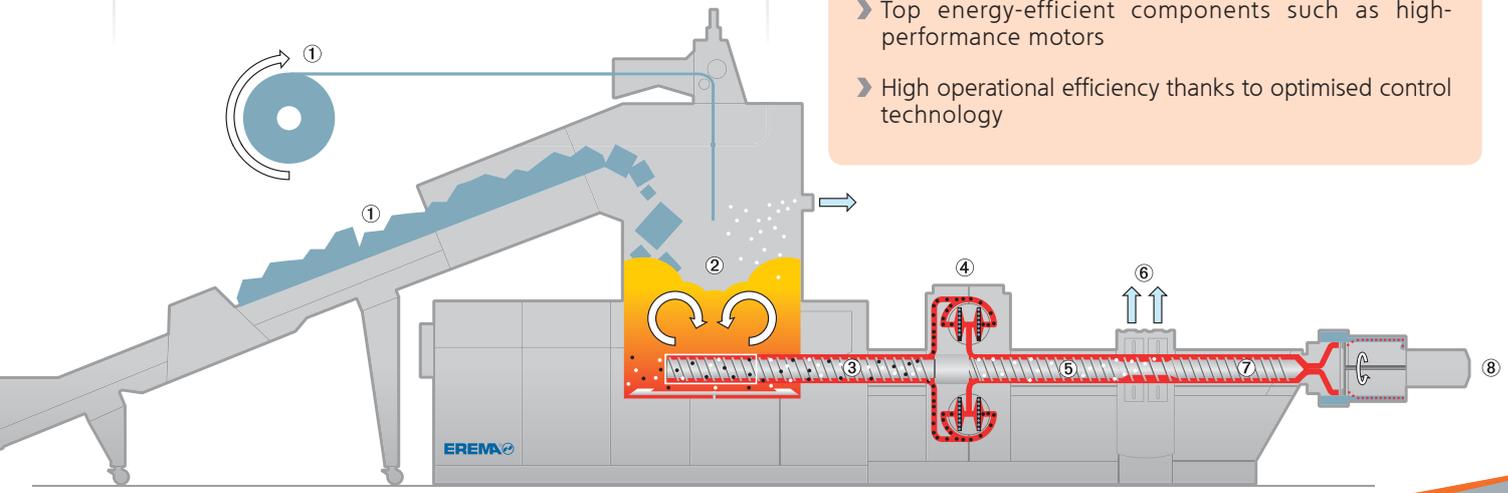
Innovative, patented additional technologies for the EREMA cutter compactor (optional)

- › With **patented Double Disc (DD) technology** materials with up to **12% residual moisture** can be processed with consistently high output
- › The **patented Air Flush Module** increases **drying performance** and output while ensuring lower energy consumption and extending plant service life
- › **Optimised large EREMA cutter compactor**



ecoSAVE®

- › Top energy-efficient components such as high-performance motors
- › High operational efficiency thanks to optimised control technology



System layout TVEplus



Technical data TVEplus®

Systems available	Average output capacity in kg/h*							
	LDPE, LLDPE		HDPE		PP		PS	
	min	max	min	max	min	max	min	max
EREMA 1007 TVEplus	250	350	200	300	250	350	300	400
EREMA 1108 TVEplus	320	450	300	400	360	450	400	500
EREMA 1109 TVEplus	450	550	400	450	400	550	500	650
EREMA 1310 TVEplus	550	650	500	580	550	650	650	800
EREMA 1512 TVEplus	750	1000	700	850	750	950	900	1100
EREMA 1514 TVEplus	950	1300	800	1100	850	1300	1200	1450
EREMA 1716 TVEplus	1100	1600	1000	1300	1200	1500	1350	1600
EREMA 1718 TVEplus	1500	2000	1300	1600	1500	2000	1500	2000
EREMA 1721 TVEplus	2200	2700	1800	2200	2000	2500	2400	3000

* Depending on material properties such as moisture content, printing, degree of contamination etc.

Demonstrations and test runs with your plastic material in our customer test centre are welcome by appointment.

Choose EREMA

- › Proven and reliable technology from the global market leader
- › Constant innovations secure the lead
- › First class worldwide customer service guarantees lasting reliability and fast support
- › Outstanding end product quality
- › Customised individual solutions



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