English

Application

POST CONSUMER

CHOOSE THE NUMBER ONE.

EREMA®
PLASTIC RECYCLING SYSTEMS

POST CONSUMER RECYCLING

A new era. With EREMA.

Odour optimised, energy efficient, recyclable. And for specific applications: super clean and food contact compliant.

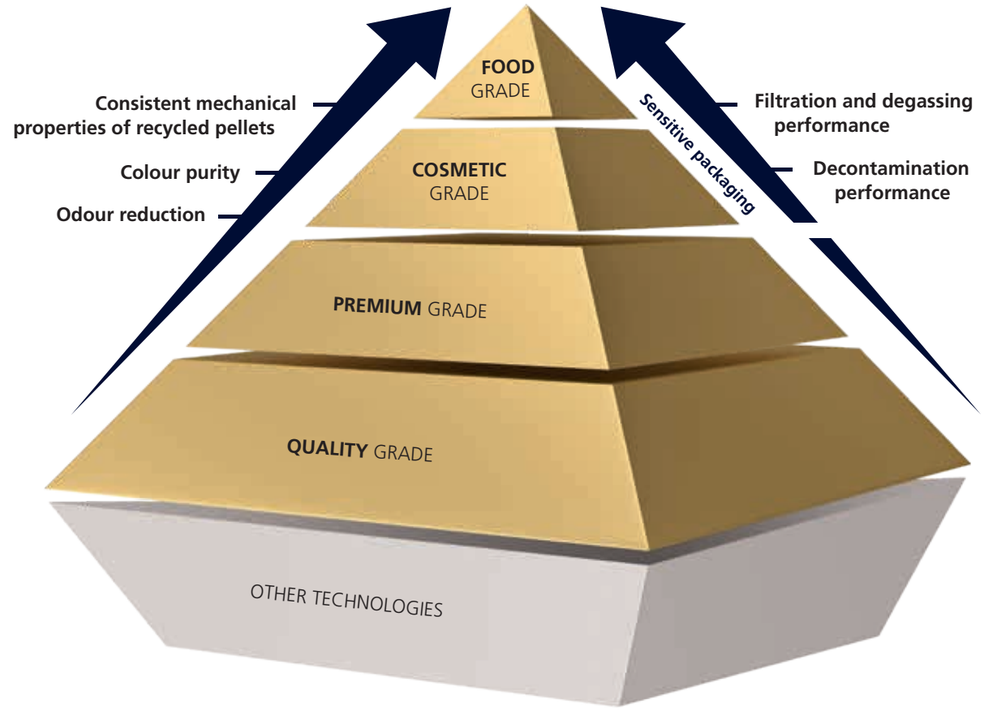
Post consumer recycled pellets of the future can do more. Get more out of your material stream with innovative EREMA technologies featuring digital assistance systems. More quality, more productivity. For a better end product. Take the new energy saving dual filtration solution INTAREMA® TVEplus® DuaFil® Compact, for example, as well as proven ReFresher anti odour technology and the smart predictive maintenance tool Predict:On. Enter this future right now with EREMA. Into the new era of post consumer recycling.

**From the challenge to the solution.
EREMA supports you along the way.**

Heavy contamination and mixed, damp material, and different collection systems often make recycling post consumer plastics a complex challenge. To obtain high-quality secondary raw materials from thin-walled LDPE films or thick-walled PE or PP regrind requires particularly reliable, stable processes and plant that is robustly constructed. Maximum performance with high-quality processing is what is needed, as offered by the recycling systems from EREMA that are designed for post consumer waste.

No matter what challenge you face implementing your post consumer project, with our unrivalled range of technological solutions in the most diverse fields of application and extensive experience gained from than 40 years of recycling machine construction, we are at your side.

THE NUMBER ONE FOR ALL LEVELS



CAREFORMANCE

We care about your performance.

Because it's about the quality you achieve. And pass on to your customers.

Clean melt, clean recycled pellets. EREMA post consumer recycling machines stand for uncompromising quality, high efficiency, powerful filtration, and safe handling. For top-quality end products.

counter current®

smart start®

A reliable investment. Low TCO.

The best decision is a safe decision. EREMA systems offer an impressively low TCO (total cost of ownership), rapid ROI, low energy consumption and high uptime. Fully in keeping with high productivity, cost effectiveness and efficiency.

Value retention through and through.

Not just any machine. It's got to be an EREMA. Good to know that the robust construction, advanced technology and first-class EREMA service ensure a high resale value of your EREMA machine.

Built to perform. Built for 24/7.

Consistent processes, straightforward operation and a high degree of automation: production and operations managers appreciate these aspects of INTAREMA® recycling systems with innovative Counter Current® technology. The fact that the pellets remain stable even if the input material parameters change is a clear flexibility bonus.

With our recycling machines, you get systems which have been tried and tested thousands of times and have also put their reliability to the test in the toughest conditions. Because they are built using high-quality components and a robust design, our machines offer enhanced safety, reduce maintenance costs and ensure greater overall availability.

- **Easy to operate** - high degree of automation
- **Maximum system availability**
- **Low maintenance costs** thanks to robust construction, durable components and the capability to carry out predictive maintenance (PredictOn digital assistance system)
- **High reliability**
- **Top quality components from 3 S included** Key core components for extrusion and filtration are manufactured in Austria by 3 S, the EREMA Group subsidiary that specialises in the production of particularly demanding extruder parts.

Save costs thanks to energy efficiency.

Electrical power consumption is a key cost factor in post consumer recycling. Technologies that use energy very economically therefore have a clear advantage. For decades, EREMA has been a pioneer in energy efficiency. The latest example is the innovative INTAREMA® TVEplus® DuaFil® Compact. The fact that it operates at a reduced melt temperature and is extraordinarily compact improves the quality of the plastic melt and significantly increases energy efficiency. That really pays off. Hour after hour.

- **Energy-saving all-in-one technology "All in one heat" concept:** From the Preconditioning Unit to the tip of the extruder or even to the anti-odour post-treatment of the pellets in the ReFresher: this is energy-efficient material preparation in just one step
- **Saves production costs**
- **Lowers the total cost of ownership (TCO)**
- **Maximum resource efficiency:** technology saves energy, water and space and reduces CO_2 emissions

RECYCLING MORE DEMANDING

POST CONSUMER MATERIALS

I Collection

II Sorting

III Washing

afterwards only
approx. **0.5 %**
residual contamination

IV Extrusion

INTAREMA® TVEplus® Regrind Pro®

INTAREMA® TVEplus®

1 Ideal material preparation in the **Preconditioning Unit**

Cutting, homogenising, heating, drying, compacting, buffering and dosing – in a single stage. The dynamically controlled Preconditioning Unit (PCU) is multitalented. It prepares the plastic ideally for the extruder and sets the course for consistently high end product quality already at the beginning of the recycling process.

Counter Current technology

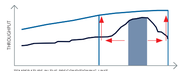
The heart of the Preconditioning Unit is our patented Counter Current® technology. Thanks to the changed direction of rotation, the extruder handles more material in a shorter time. Thanks to the optimised intake system a wide range of materials can be processed. At amazingly low temperatures, with great process stability, high throughput and absolute flexibility.

CUTS · HOMOGENISES · HEATS · DRIES

COMPACTS · BUFFERS · DOSES

counter current®

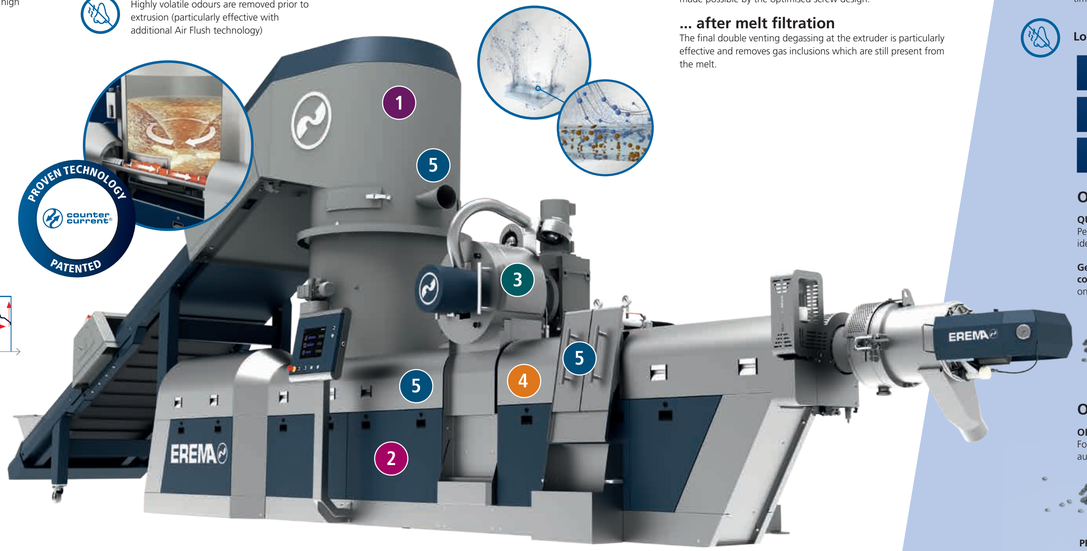
The highest possible **process stability and flexibility** thanks to Counter Current



2 **Gentle melting,** low shear stress

Because it has been preheated in the PCU, the material in the extruder reaches the required melt temperature more quickly. This shortens the extrusion process (shorter extruder), the time taken to melt the material, and the time it spends in the extruder.

- Input material: up to 10 % moisture possible
- Moisture is removed prior to extrusion
- Highly volatile odours are removed prior to extrusion (particularly effective with additional Air Flush technology)



3 **Highly efficient filtration before degassing**

Thanks to the low shear stress, impurities are hardly broken up and are therefore large enough to be removed easily and efficiently by the EREMA laser filter before the melt is homogenised.

Against odour and discolouration:

The early removal of impurities such as cellulose (wood, paper), rubber and silicone means that they can no longer outgas or overheat later and no unpleasant odours or discolourations develop, which is a decisive quality bonus for the melt.

4 **Perfect homogenisation**

Greater homogenisation efficiency downstream of filtration and upstream of degassing enhances the subsequent degassing performance and improves the characteristics of the melt

5 **Powerful degassing ...**

Highly efficient triple degassing:

The first stage of degassing takes place at the start of the process in the PCU. Step two is reverse extruder degassing, which is made possible by the optimised screw design.

... after melt filtration

The final double venting degassing at the extruder is particularly effective and removes gas inclusions which are still present from the melt.

ReFresher

High-efficiency anti-odour technology.

Thermal-physical cleaning process without additives

The ReFresher cleaning process reduces odours caused by low-volatile, high-molecular substances. The technology keeps the pellets at the temperature required for fast and deep-cleansing discharge of volatile materials. Especially energy-saving: The ReFresher uses the system's intrinsic energy from the pellets, which are preheated during the extrusion process (at least 60 °C required). Thanks to the ideal, stable process preparation in the INTAREMA® TVEplus® only relatively short residence times are required inside the ReFresher .

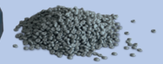
Low volatile odours out

- **Continuous odour discharge with constant heated purge gas**
- **No complex vacuum system required**
- **First in, first out: same treatment for all pellets**

Output stage 1

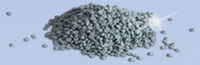
QUALITY PELLETS
Perfectly filtered, homogenised and degassed - ideal for a variety of high-quality applications.

Get even more by using the QualityOn continuous quality monitoring system:
only precisely specified pellets enter the ReFresher.



Output stage 2

ODOUR OPTIMISED
For even higher quality applications, e.g. in the automotive, living space and design sectors.



PREMIUM PELLETS

APPLICATION

LD/LLDPE stretch and shrink films

such as bulk packaging and supermarket films with paper labels

High market potential, commercially attractive
long-term growth in the market, high-quality input material, relatively pure feed (predominantly LD/LLDPE films), thanks to high and consistent EREMA quality, high recycling rates of recycled pellets in new film products are possible (with the same mechanical performance). Depending on the current rPE market price, high cost savings in film production are possible by incorporating recycled material (compared to using all virgin material)

The **CHALLENGE**

- **Large** (baled) **film sections**
- **High and varying moisture**
- **High proportion of impurities:**
  e.g. Paper (up to 5 %), wood particles (from pallets)
  Foreign polymers (e.g. strapping tapes), dust, etc.
- **Output:** high-quality homogeneous recycled pellets that have been thoroughly filtered, degassed and had any unwanted odours removed so that they are now available to produce top-quality film for first-class consumer products.

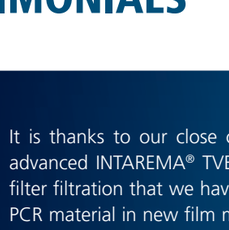
TESTIMONIALS

"It is thanks to our close cooperation with EREMA and the implementation of advanced INTAREMA® TVEplus® DuaFil® Compact technology with double laser filter filtration that we have succeeded in incorporating such high proportions of PCR material in new film materials. This would have been unthinkable just a few years ago because the mechanical properties these products need was unobtainable."

Luis Pellejer, Director Saica Natur Cycle Plus, Spain

SAICA Natur Cycle Plus produces high-quality LDPE and LLDPE pellets from post consumer supermarket film with paper labels. What's special about this is that the high INTAREMA® TVEplus® DuaFil® Compact quality of the recycled pellets makes it possible to return up to 50 percent to the production of stretch winding film and up to 80 percent to the production of stretch hoods for pallets.

"Our customers have very high quality specifications, which is why we chose an EREMA machine. With the INTAREMA® 1512 TVEplus® DuaFil® Compact 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.



Philippe Morizon, General Manager at RECUPAC, Chile

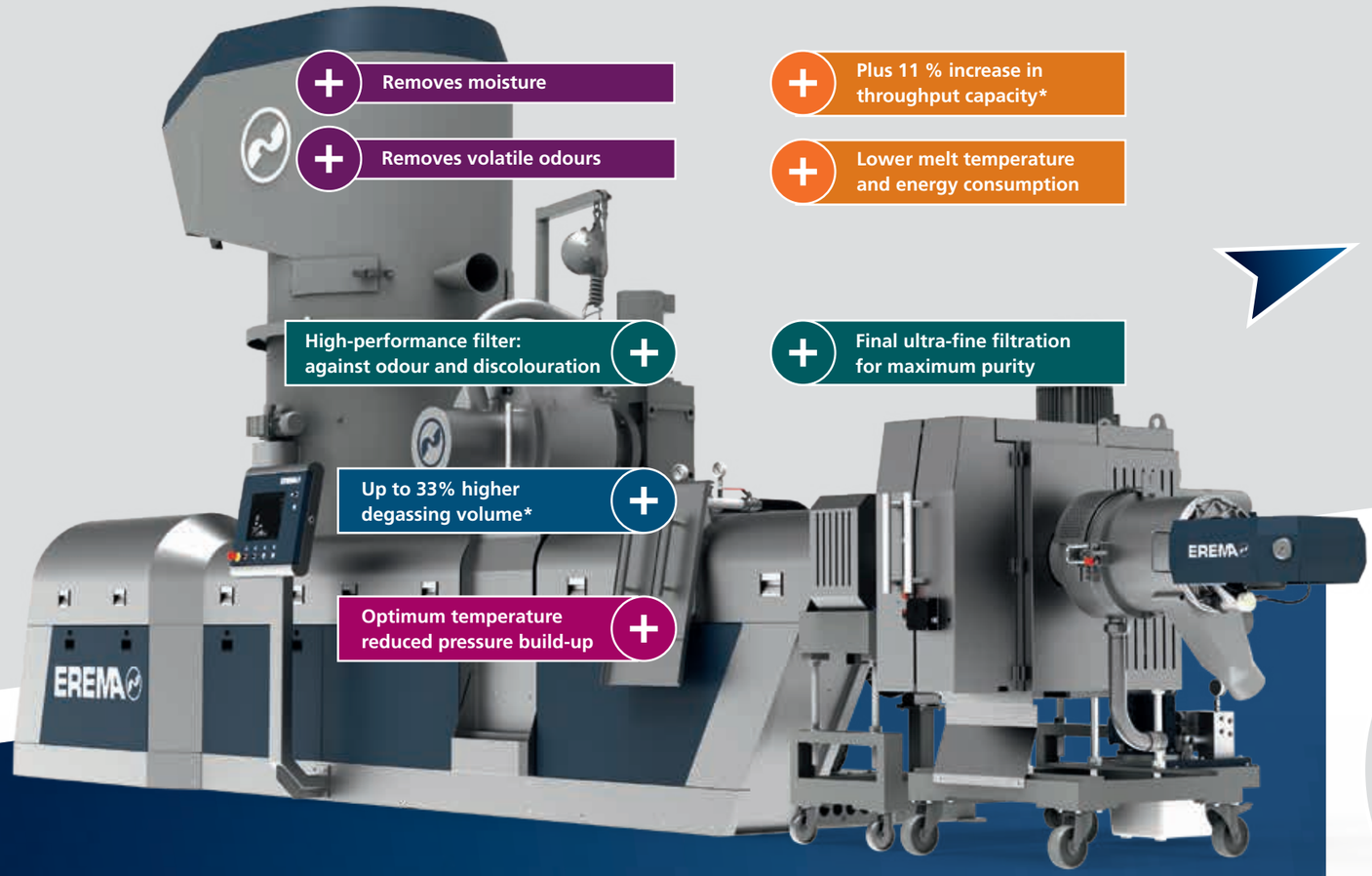
Input material: washed (LD)PE film flakes (from Lindner Washtech system) Contamination: paper, wood, adhesive tapes (foreign polymers)

INTAREMA® 1512 TVEplus® DuaFil® Compact

THE SOLUTION

LD/LLDPE stretch and shrink films

INTAREMA® TVEplus® DuaFil®
Compact



- Removes moisture
- Removes volatile odours
- High-performance filter: against odour and discolouration
- Up to 33% higher degassing volume*
- Optimum temperature reduced pressure build-up
- Plus 11 % increase in throughput capacity*
- Lower melt temperature and energy consumption
- Final ultra-fine filtration for maximum purity

Shrink-to-shrink

PREMIUM GRADE — Odour-optimised recycled pellets in premium quality

New end product with recycled material: shrink film as outer packaging

High-performance filter prevents burnt odours and discolouration:
Temperature-sensitive cellulose contaminants (paper labels, wood particles) are removed at an early stage. Additional bonus: because the operating temperature is lower in the DuaFil® Compact Zone, it significantly reduces the melt temperature, and **every degree less counts!**

Up to 33% higher degassing volume*
Thanks to the design of the DuaFil® Compact, it delivers extremely powerful degassing performance that effectively prevents the re-gassing of already of already degassed melt

Improved, temperature-reduced pressure build-up
Patented DuaFil® Compact Zone with mild, short transport screw instead of discharge metering zone combined with special melt pump

Double filtration for maximum purity
Final ultra-fine filtration for particularly high pellet purity

Lower melt temperature and energy consumption
for particularly high pellet and end product quality with low energy costs

* Significant advantages in degassing and throughput capacity of the INTAREMA® TVEplus® DuaFil® Compact compared to an INTAREMA® TVEplus® without DuaFil® Compact technology: 12 to 33 % higher degassing volume (depending on speed) and 11 % more throughput when recycling LDPE supermarket film containing paper

Alternative solution:

INTAREMA® TVEplus®
(see page 6/7 for technical details and advantages)

QUALITY GRADE

New end product with recycled material:
e.g: construction film and shrink film for bricks (solid)

Stretch-to-stretch

PREMIUM GRADE — Odour-optimised recycled pellets in premium quality

New end product with recycled material:
e.g. stretch film with up to 50 % rPE

Highly efficient anti-odour ReFresher technology

ReFresher

- **Effective reduction of highly volatile, high molecular weight odorous material** in the recycled pellets
- Thanks to the stable preparation process in the INTAREMA® TVEplus® DuaFil® Compact **only relatively short residence times** are required **inside the ReFresher.**

New end product with recycled material: e.g. bags for food

The SOLUTION

APPLICATION

Agricultural film

Wrapping films, silage films, agricultural stretch films, cover films, greenhouse films

Great commercial potential:
market with long-term growth, high-quality input material, relatively consistent (mainly LD/LLDPE films), low foreign polymer contamination

The
CHALLENGE

High and varying moisture
(outdoor storage, wash system)

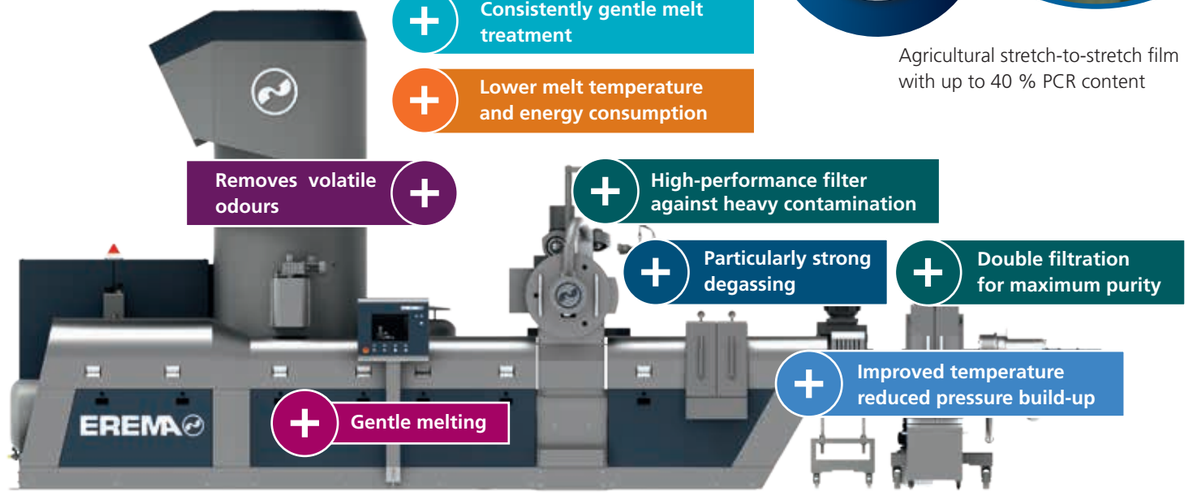
Very **high level of contamination:**
due to abrasive, mineral material (e.g. sand, stones), organic impurities (e.g. soil, grass, vegetable scraps, roots, wood particles) and metals

and at the same time very soft and mostly only round **25 µm to 100 µm thin films**
(mainly LD/LLDPE films)

THE SOLUTION

Agricultural film

Agricultural stretch-to-stretch film with up to 40 % PCR content



INTAREMA® TVEplus® DuaFil®
Compact

High-performance filter against heavy contamination Prevents odour and discolouration

Up to 33 % higher degassing volume*):
Thanks to the design of the DuaFil® Compact, it delivers extremely powerful degassing performance that effectively prevents the re-gassing of already of already degassed melt

Improved, temperature-reduced pressure build-up
Patented DuaFil® Compact Zone with mild, short transport screw instead of discharge metering zone combined with special melt pump

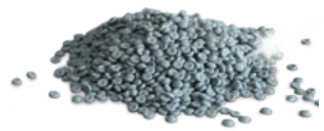
Double filtration for maximum purity
Final ultra-fine filtration particularly effective against any remaining abrasive impurities for thinner end products and to protect against wear on the downstream (film) production machine

Consistently gentle melt treatment
Low shear from melting to pelletising

Lower melt temperature and energy consumption for particularly high pellet and end product quality with low energy costs

Alternative solution:

INTAREMA® TVEplus®
(see page 6/7 for technical details and advantages)



Highly efficient anti-odour ReFresher technology

*) Extremely strong degassing performance: Ultimately, depending on the speed, the INTAREMA® TVEplus® DuaFil® Compact has 12 to 33 % higher degassing volume compared to an INTAREMA® TVEplus® without the DuaFil® Compact system.

The **SOLUTION**

APPLICATION

HDPE and PP regrind material

from household packaging

The **CHALLENGE**

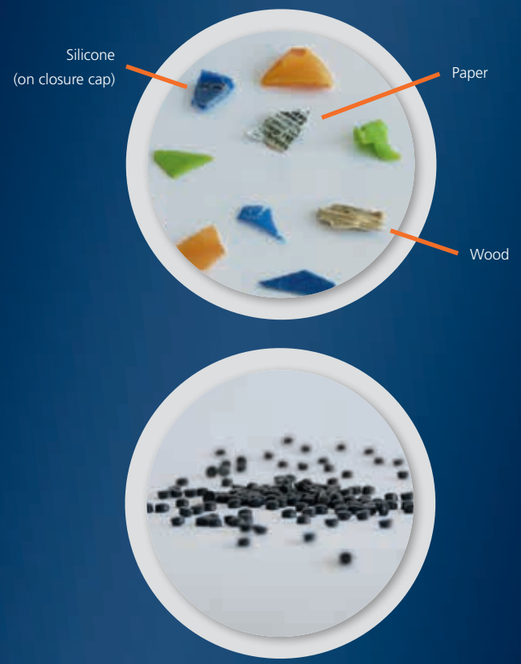
High moisture up to 4 %

Strong, varying degrees of contamination with various impurities, e.g. rubber and silicone (from closure caps), paper and foreign polymers (PET, PA) e.g. from labels, wood

Unpleasant odours in the input material in the form of substances migrated from foodstuffs, cosmetics and cleaning agents, as well as from contaminants adhering to the surface

Prevents additional odours in the molten state (during the recycling process) due to potential odour triggers such as rubber, silicone, paper and wood

A wide range of regrind bulk densities (from thin-walled flakes to thick-walled regrind) and different polymers (PE, PP, PS, ABS, etc.) can be processed with just one system



BEST PRACTICE

HDPE and PP regrind material

COSMETIC GRADE
Quality on rinse off.

Thanks to state-of-the-art EREMA technologies, many years of experience and working together closely with our partners along the value chain, high-end cosmetic applications such as packaging for rinse-off products, can be made directly from post consumer recyclate. Rinse-off products are body care products that are used to cleanse the skin and hair, but are rinsed off with water and therefore do not remain on the skin or hair.

100 % post consumer PCR-HDPE

from the yellow bag

In a joint project, Werner & Mertz, EREMA and The Group with the Green Dot developed the first shower gel bottle made of 100% PCR-HDPE that has been approved for use in the cosmetics sector.

Picture source: The Group with the Green Dot, Werner & Mertz

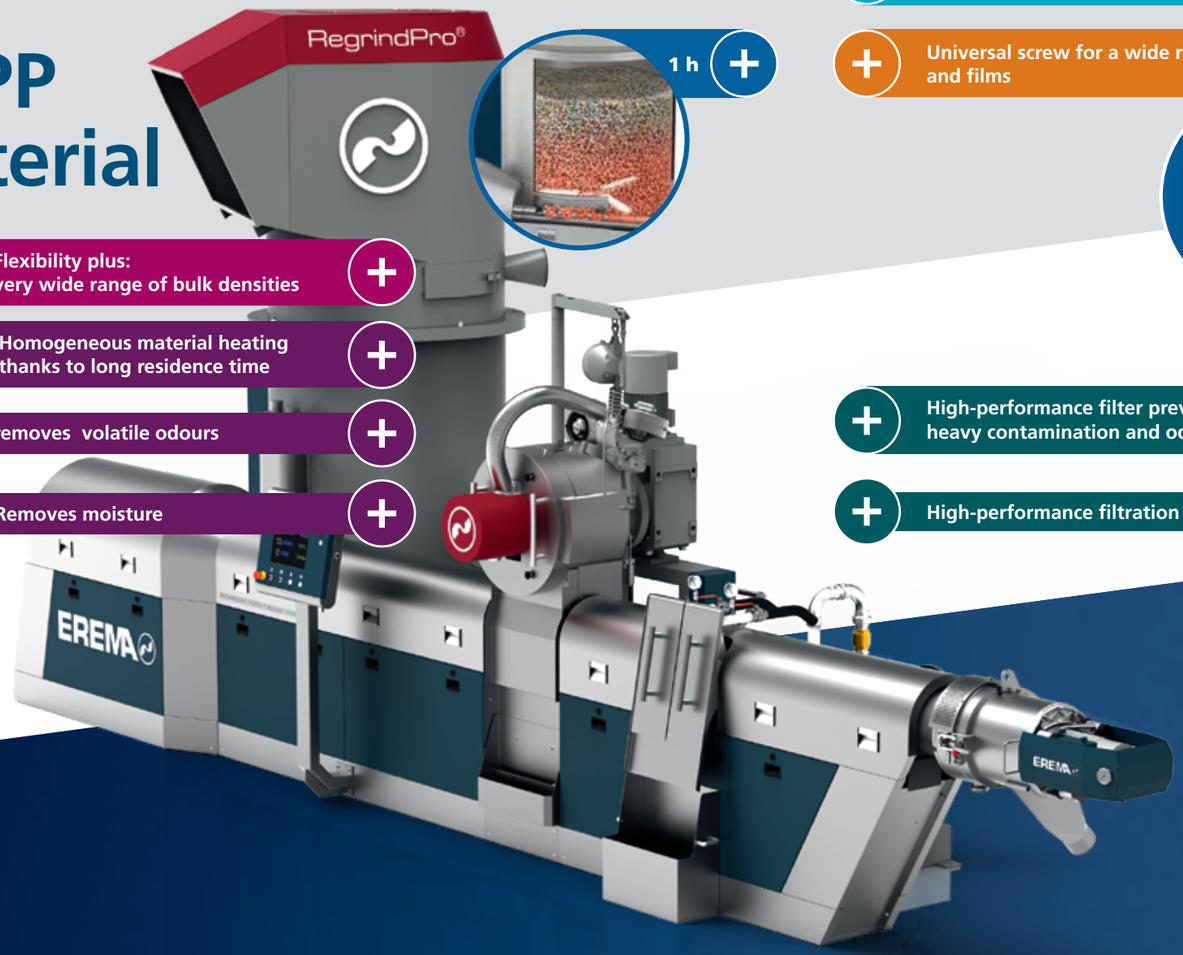
What is decisive for the high decontamination performance of this EREMA technology combination is the pre-treatment of the material during the one-hour residence time in the Preconditioning Unit of the recycling extruder and the additional removal of volatile odorous substances from the pellets using ReFresher anti-odour technology.

THE SOLUTION

HDPE and PP regrind material

1 h +

- Flexibility plus: very wide range of bulk densities +
- Homogeneous material heating thanks to long residence time +
- removes volatile odours +
- Removes moisture +



RegrindPro®

+ No-compromise gentle processing of regrind material - from melting to pelletising.

+ Universal screw for a wide range of regrind types and films

QUALITY GRADE

+ High-performance filter prevents heavy contamination and odours

+ High-performance filtration for maximum purity

PREMIUM GRADE
Odour-optimised recycled pellets in premium quality

+ Highly efficient anti-odour ReFresher technology

Homogeneous heating thick-walled flakes made from regrind material

- **Long residence time (up to 1 hour),** thanks to the slow rotation of the specially designed rotor disc with simultaneously higher filling level
- **Additional bonus:** additives such as $CaCO_3$ are distributed homogeneously thanks to the longer residence time and high filling level.

Additional flexibility: very wide range of input bulk density from 30 to 800 g/l

Perfect for thin-walled rigid flakes and thick-walled regrind material as well as for other forms of material such as films and non-woven applications.

The advantage of being able to process material regardless of its bulk density is that, compared to conventional twin screw solutions, this complies with the trend towards ever thinner packaging films.

No-compromise gentle processing of regrind material - from melting to pelletising.
For a particularly high-quality recycled pellets and end products with the best specifications in terms of mechanical properties, surface quality, dyeability, odour, etc. and with a particularly high recycle content.

High-performance filter prevents heavy soiling and odours
Early and effective removal of rubber, silicone, paper, wood, etc. counteracts subsequent burnt odours

High-performance filtration for maximum purity
Considerably higher filtration efficiency compared to conventional single screw and twin screw systems

Additional advantage of a universal auger:
Fast changeover without changing the screw - from thin-walled HDPE or PP flakes to thick-walled WEEE regrind particles and even film in no time at all

FOOD GRADE

Can food contact compliant products also be made from recycled post consumer polyolefin pellets?

YES!

EREMA technologies for the recycling of PO materials (polyolefins) have already been approved by a North American food safety authority: the combination of the INTAREMA® TVEplus® with the ReFresher module allows recycled PO pellets from defined input streams to be reused in food packaging in proportions of up to 100 per cent.

EREMA. Pioneer and expert in food contact compliance

We have been developing technologies and building machines that produce food-grade recycled pellets for more than 25 years, especially for high-quality PET and bottle recycling, where EREMA is a global leader, as confirmed by more than 400 VACUREMA® and VACUNITE® systems worldwide.

Thanks to our extensive expertise in the PET sector, coupled with knowledge specific to the post consumer polyolefin sector, as well as our company infra-structure featuring the very latest equipment, including an advanced laboratory, and many years of working together with leading institutes, EREMA has also become the industry leader in the area of food contact compliance in the polyolefin sector.

HDPE regrind material

- NOL EREMA for a superclean recycling process
- NOL EREMA customers (Australia, Ireland, Mexico, India, etc.)
- Technology: INTAREMA® TVEplus® RegrindPro® + ReFresher

PP regrind material

- NOL EREMA customers (China, UK, US post consumer recyclers)
- Technology: INTAREMA® TVEplus® RegrindPro® + ReFresher

LLDPE/LDPE film

- NOL EREMA customer (US post consumer recycler: INTAREMA® 2021 T-VEplus®)
- NOL EREMA customer (US post consumer recycler: LDPE stretch and shrink film)

SUPERCLEAN recycling process

In August 2019, the superclean recycling process was certified by an American food safety authority as suitable for the production of milk and juice bottles, as well as meat trays, disposable tableware and cutlery, provided the input material comes from milk and juice bottles. In November 2020, this authority confirmed an additional input stream and more application uses for the recycle treated using this process. In addition to all HDPE beverage containers, HDPE closures of HDPE, PP and PET beverage bottles can also be processed. Material containing up to 100 percent recycle can be used in the production of containers for direct contact with food of all kinds.

HDPE beverage containers & HDPE beverage closures

- All HDPE beverage containers, e.g. milk and juice bottles
- HDPE beverage closures (from HDPE, PP and PET beverage bottles)

HDPE

PCR-HDPE

Food grade PCR HDPE pellets

- Suitable for the production of containers for direct contact with all types of food, e.g. milk and juice bottles, meat trays, etc.
- With up to 100 % PCR HDPE content in the end product

INTAREMA® TVEplus® RegrindPro® with ReFresher

In order to produce a recyclate of such high quality from PCR material, the recycling machine needs to deliver very high decontamination performance. While the INTAREMA® TVEplus high degassing extrusion system removes mainly highly volatile, low molecular weight substances, the ReFresher ensures a significant reduction of the low volatile, high molecular weight organic compounds in the recycled pellets. At the same time, the thermo-physical process works in a particularly energy-saving way, because it makes use of the thermal energy of the recycled pellets that are still warm after the extrusion process.

POLYOLEFINS: novel technology in the EU

In the EU, the permit for food-safe recycled pellets is based on a novel technology (Regulation 2022/1616). EREMA supports recycling companies in generating data and evidence for the EFSA (European Food Safety Authority) assessment process.

APPLICATION
Automotive & WEEE

The **CHALLENGE**

- Injection moulded parts with or without glass fibre reinforcement made of PE, PP, PA, PC, ABS etc

  Automotive (injection moulded) parts with and without (glass) fibre reinforcement
- Bumpers, intake hoses, pipes, fuel tanks, car battery housings, covers
- Textiles (car mats, floor mats)
- Safety belts
- PE tyre cord from used tyres
- Waste Electrical and Electronic Equipment (WEEE)
- Regrind material with different particle sizes, high bulk density
- Plastic films, detached from laminated safety glass (windscreens)

Better eco-balance as a result of recycling

With the increasing use of plastics in the automotive sector, pressure is also growing on the industry to recycle plastic components in vehicles at the end of their service life.

To improve the eco-balance of vehicles, the automotive industry faces the tasks of firstly avoiding the creation of waste by improving product designs, and secondly, using plastics in a way that they can be recycled later.

THE SOLUTION
Automotive & WEEE

- No-compromise gentle processing of regrind material - from melting to pelletising.
- Universal screw for a wide range of regrind types and films
- Homogeneous distribution of additives such as $CaCO_3$ thanks to longer residence time and high filling level

QUALITY GRADE

- Homogeneous material heating thanks to long residence time
- Removes moisture
- Removes volatile odours
- Flexibility plus: very wide range of bulk densities

- High-performance filter against strong contamination and to prevent odours
- High-performance filtration for maximum purity

RegrindPro®

- Gently processed, filtered melt

QUALITY GRADE

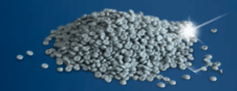
COREMA® RegrindPro®

Recycling and compounding regrind material in a single processing step.

COREMA® combines the advantages of recycling and compounding in a single machine. During the recycling process, raw material (e.g. WEEE regrind) is converted into a gently treated, filtered melt using EREMA technology and then fed directly into a co-rotating twin screw extruder. 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, such as $CaCO_3$talc and Peroxyd, large amounts of fillers and reinforcing agents can also be admixed. The result is customised plastic recyclates for high-quality applications.

- Mixing of additives, fillers and reinforcing materials
- Powerful twin screw degassing
- Customised plastic recyclates for high-quality applications

PREMIUM GRADE
Odour-optimised recycled pellets in premium quality



- Highly efficient anti-odour ReFresher technology

APPLICATION

Washed LD/LLDPE film flakes

from household waste collection (e.g. DSD 310)

The CHALLENGE

Photo credit: LINDNER Washtech

High and varying moisture:
Up to 12 % mainly due to upstream washing process

Heavy, varying contamination

- High proportion of paper, aluminium and foreign polymers (PET, PA) originating from multilayer films
- Organic contamination mainly from food residues and lactic acid
- Other foreign polymers such as nitrile rubber (NBR) from disposable gloves

WHAT THE EXPERT SAYS

"As far as I'm concerned, only the INTAREMA® TVEplus® DuaFil® Compact can process washed LD film flakes from household waste. High moisture, paper and aluminium particles, foreign polymers and organic contamination make this a real challenge. This machine does an excellent job.

In addition to removing paper and aluminium, high-performance double filtration also handles multilayer film contaminants without problems. The very high degassing performance is particularly impressive. Thanks to the DuaFil® Compact system, there is no need for renewed degassing of the already degassed melt, making ultra-fine final filtration possible.

This is a powerful solution that covers every aspect of this challenging post consumer application."

Clemens Kitzberger
Business Development Manager,
Application Post Consumer

EREMA GROUP

THE SOLUTION

Washed LD/LLDPE film flakes

from household waste collection (e.g. DSD 310)

Consistently gentle melt treatment

Lower melt temperature and energy consumption

Prevents high moisture
PCU pre-drying + Double Disc technology

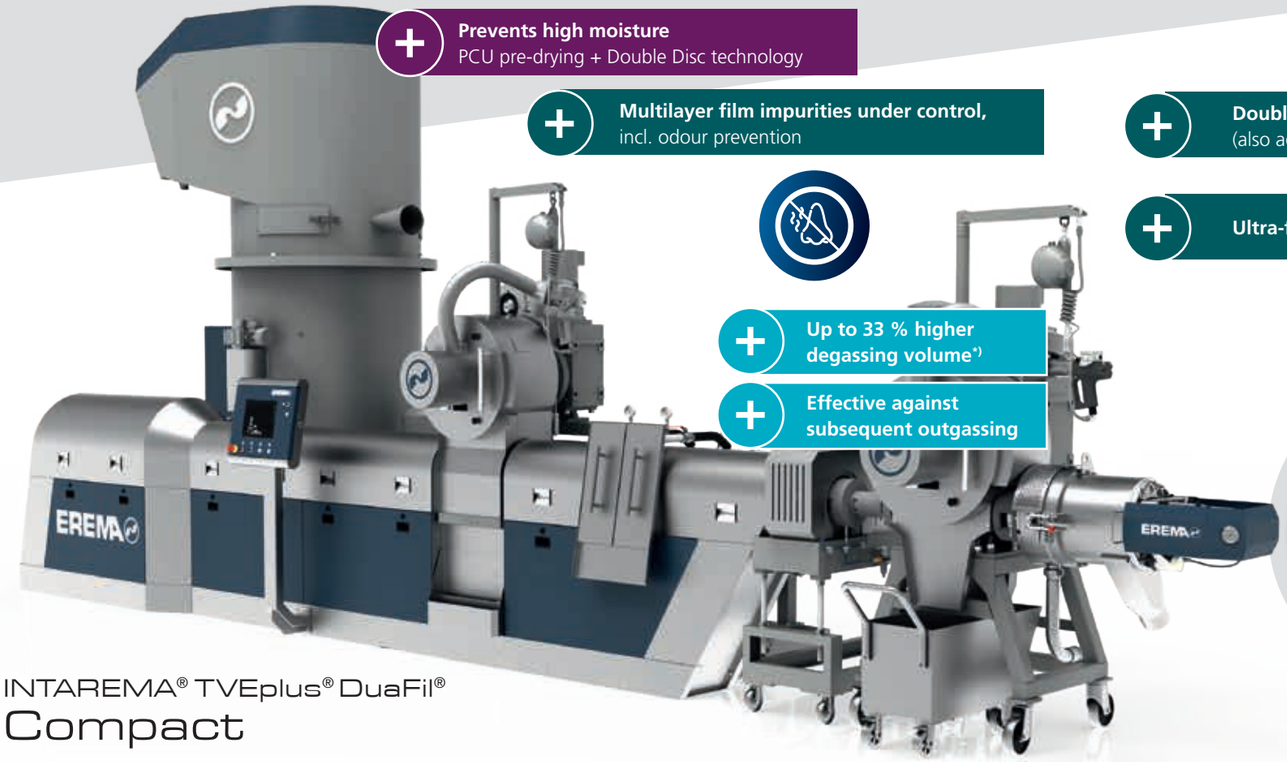
Multilayer film impurities under control,
incl. odour prevention

Double filtration for maximum purity
(also against NBR and latex)

Ultra-fine filtration up to 50 µm

Up to 33 % higher degassing volume*)

Effective against subsequent outgassing



DSD 310 High Quality
100 % film

INTAREMA® TVEplus® DuaFil® Compact

Handles high moisture: thanks to efficient predrying in the Preconditioning Unit (PCU) and patented Double Disc (DD) technology, materials can be processed with a residual moisture of up to 12 %.

Powerful filter against impurities from multilayer films, prevents burnt odours
The EREMA laser filter efficiently removes contamination from multilayer films such as aluminium and foreign polymers (PET, PA). Effective against burnt odours: temperature-sensitive paper fragments are eliminated at an early stage.

Final ultra-fine filtration for maximum purity
- Ultra-fine filtration down to 50 µm possible - thanks to temperature-reduced DuaFil® Compact mode of operation
- Also ideal for handling application-typical NBR or latex particles from disposable gloves

Effective against organic contamination
(mainly from food residues, and lactic acid)

- Initial **pre-degassing** takes place in the Preconditioning Unit (additional bonus: also protects the extruder screw)
- **High-performance filtration**
- **Up to 33 % higher degassing volume***: Extremely high degassing performance thanks to DuaFil® Compact design
- **Prevents subsequent outgassing:** because it is isolated from the build up of pressure and temperature, unlike in other dual filtration solutions, in the DuaFil® Compact the highest temperature is not at the end of the extruder, but already upstream of the degassing stage. This counteracts subsequent outgassing of the melt.

Consistently gentle melt treatment
Low shear from melting to pelletising

Lower melt temperature and energy consumption for particularly high pellet and end product quality with low energy costs

Alternative solution:

INTAREMA® TVEplus®
(See pages 6-7 for technical details and advantages)

DSD 310 100 % film

* Extremely strong degassing performance: Ultimately, depending on the speed, the INTAREMA® TVEplus® DuaFil® Compact has 12 to 33 % higher degassing volume compared to an INTAREMA® TVEplus® without the DuaFil® Compact system.

PREMIUM GRADE
Odour-optimised recycled pellets in premium quality

ReFresher

Highly efficient anti-odour ReFresher technology

30 % DSD 310 recycled pellet content in final film: sorted (natural), hot wash, gentle extrusion with 50 µm double filtration, ReFresher odour optimisation

BluPort®

Digital assistance systems. Apps for your support.

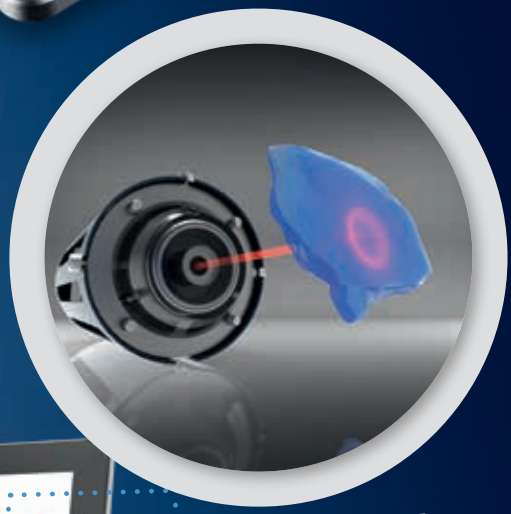
Get even more out of your machine -
with BluPort®, EREMA's digital platform with many
useful assistance systems for boosting machine performance.

QualityOn

Efficient online quality measurement. Directly in the recycling process.

Continuous quality monitoring during the process at the machine instead of later in the laboratory.

- Polymer and filler composition of input material
- MVR value (Melt Volume Rate)
- Colour value (L*a*b* colour space)
- IV value (Intrinsic Viscosity)



PredictOn

Stay productive! The predictive maintenance tool

Take action today to prevent downtime tomorrow for more machine availability and higher productivity! The new predictive maintenance tool from EREMA provides machine data relating to the condition of the plant that enables predictions regarding the maintenance work that is needed. Digital machine monitoring for early detection of anomalies on critical components enhances the expertise of your experienced maintenance experts.

PredictOn:Drive

Whether it's the motor temperature, gear teeth, or pump bearings, PredictOn:Drive provides you with a comprehensive solution for the monitoring and predictive maintenance of all main drive trains on the Preconditioning Unit and extruder.

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PLASTIC RECYCLING SYSTEMS