



RegrindPro®

The gentle way
to success in regrind recycling.

CHOOSE THE NUMBER ONE.

INPUT
regrind



RegrindPro® – the gentle way to top quality

- Uncompromisingly **gentle regrind processing** for top recycled pellet quality
- The end products produced are convincing with **top functional characteristics** in terms of mechanical properties, surface quality, dyeability, smell, etc. and with a particularly high recycled pellet content

RegrindPro® – pure performance

- **Remarkably high-performance filtration:** the EREMA Laserfilter removes undesired impurities particularly effectively
- Considerably higher **filtration efficiency** compared to conventional single and twin screw systems

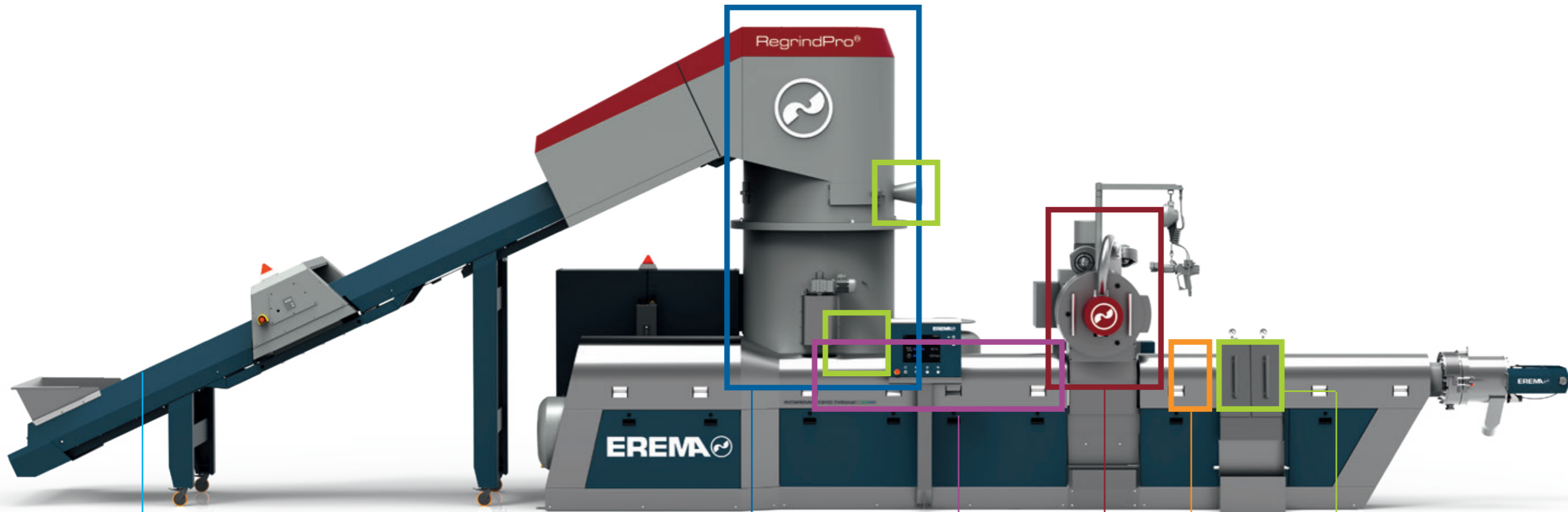
RegrindPro® – the universal machine

- **Wide variety of regrind types under perfect control** – without screw exchange, with consistently high capacities
- Very broad input bulk density range from 30 to 800 g/l – therefore ideally suitable for both regrind and other types of material such as **film, sheet and nonwoven applications**
- Save set-up costs, increase productivity: with the material all-rounder **you remain as flexible as possible!**



OUTPUT
recycled pellets



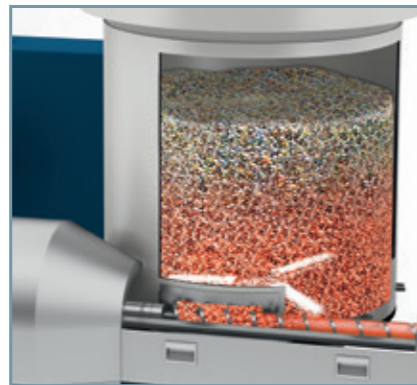


- The regrind is still cold on the conveyor belt
- Thick-walled regrind particles, high bulk density
- For example PE, PP, ABS, PS and mixtures of them
- Regrind source: packaging, automotive applications, waste electrical and electronic equipment (WEEE), household, building/construction, etc.
- Moisture up to 8%
- Heavy, varying contamination with a multitude of impurities: rubber, silicone, soft contaminants (wood and paper) and foreign polymers (PET, PA), etc.

Preconditioning Unit

The gentle way begins in the preconditioning unit. It gives the thick-walled regrind particles what they need to be **warmed through homogeneously**: a longer residence time. This is made possible by a slower turning of the new rotor disc with a higher filling level at the same time. Consequently even high moisture disappears and the regrind is perfectly prepared for the extruder.

Additional bonus: fillers such as CaCO₃ are distributed homogeneously thanks to the longer residence time and high filling level.



- homogenises
- heats
- dries
- buffers
- doses

Gentle melting

Thanks to the preconditioning unit **the extruder is fed warm** instead of cold. The advantage over conventional systems: a short extruder screw is enough to melt the already dry and thoroughly warmed regrind particles. The shear stress is extremely low as a result while the melt quality is high.

High-performance filtration

Clean melt, pure performance: efficient filtering is one of the key strengths of the new RegrindPro®. Thanks to the gentle preparation in advance the EREMA high-performance Laserfilter has an easy time. Dirt particles and impurities such as silicones are hardly reduced in size before and are therefore large enough for them to be easily removed from the melt.

The early removal of undesired materials means they can no longer outgas and **no unpleasant smells** develop – a decisive quality bonus for the melt.

Optimised high performance: through the redesign of the Laserfilter scraper geometry, rubber-like, non-melting contaminants such as **silicones and linked polymers are lifted particularly quickly and continuously from the screen** – and thus filtered even more effectively.

Perfect homogenisation

The final homogenisation of the melt downstream of filtration and upstream of degassing enhances the subsequent degassing performance and **improves the characteristics of the melt**.

Highly efficient triple degassing

The new RegrindPro® features convincing, high-performance degassing. This takes place very effectively in three stages: initial degassing already occurs in the preconditioning unit. Step two is reverse extruder degassing – made possible through optimised screw design. The final double venting degassing at the extruder is particularly effective and **removes gas inclusions** which are still present **from the melt**.

The melt is now clean, homogenised and perfectly degassed. And thus: ready for pelletising.



RegrindPro®

Go the gentle way

Gentle processing and highly efficient filtration

Are you looking for the ultimate way of producing **top recycled pellets from thick-walled regrind**? For end products with best performance properties and a particularly high recycle content? The new INTAREMA® ReGrindPro® offers the ideal solution: extremely gentle processing in combination with high-performance filtration.

The innovative system unites all the benefits of the INTAREMA® plant generation such as the top technologies Counter Current, Smart Start and ecoSAVE®, which set the standard in **production efficiency in plastics recycling**.



The universal machine. This is how you stay flexible.

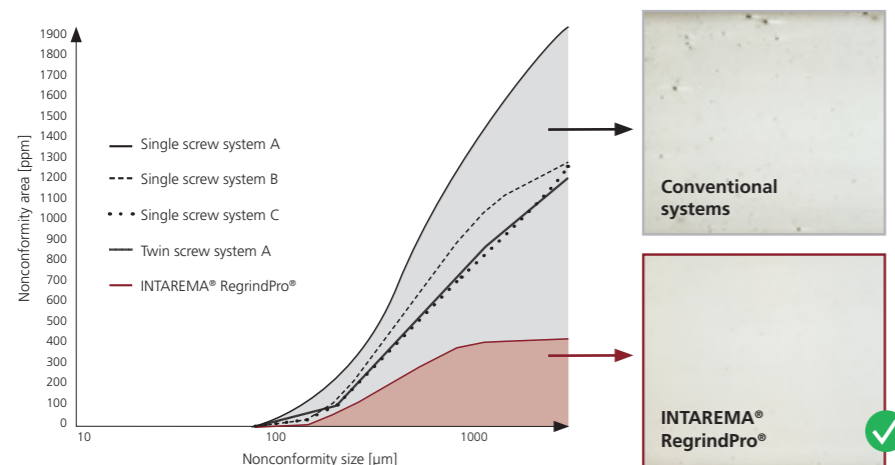
One single machine which turns a **wide variety of regrind types** into high-quality recycled pellets? ReGrindPro® technology makes it possible: thanks to the thorough warming through of the input material in the preconditioning unit and a particularly gentle universal screw it ingeniously processes an extremely wide range of polymers with different melting points and energy contents.

As a result **you change very quickly between PE, PP, ABS, PS and other regrind types** – and without exchanging screws! Plus: there are no compromises in terms of throughput and quality. This is flexibility that lowers your set-up costs and increases your productivity!

Your flexibility bonus: thanks to the extremely broad input bulk density range of 30 to 800 g/l the system is ideally suitable for both regrind and other types of material such as **film, sheet and nonwoven applications**.

The high-performance machine is thus the **absolute material all-rounder**. Highly flexible, strong performance and energy-saving. And extremely easy to operate.

Top values for ReGrindPro® Comparison of regrind recycling systems



Recycled pellet quality test: film test with defect analysis on an OCS measuring extruder ME25/25D-V3
Test material: recycled pellets made from PP regrind on various regrind recycling systems (filtration: 140-180 µm)

Technical data INTAREMA® TVEplus®

Post Consumer & Industrial Recycling	Film: INTAREMA® TVEplus®							
	Average throughput capacity in kg/h*							
	Systems available		LDPE, LLDPE film		HDPE film		PP film	
	min	max	min	max	min	max		
1006 TVEplus	220	275	200	220	290	350		
1007 TVEplus	350	430	300	350	390	470		
1108 TVEplus	440	550	400	450	500	600		
1309 TVEplus	530	650	480	540	600	750		
1310 TVEplus	700	850	650	750	750	900		
1512 TVEplus	950	1200	850	920	1050	1250		
1714 TVEplus	1250	1550	1100	1220	1400	1650		
1716 TVEplus	1500	1900	1400	1550	1800	2100		
2018 TVEplus	1900	2400	1700	1900	2200	2600		
2021 T-VEplus	2400	3000	2200	2500	3000	3500		

* all throughput capacities are examples, throughput capacity depending on material properties such as residual moisture, print, degree of contamination, etc.

Technical data INTAREMA® TVEplus® ReGrindPro®

Post Consumer & Industrial Recycling	INTAREMA® TVEplus® ReGrindPro®									
	Average throughput capacity in kg/h*									
	Systems available		HDPE bottles MFI > 1.6 g/10min (5kg/190°C)		PP		HIPS		ABS / PC	
	min	max	min	max	min	max	min	max	min	max
1108 TVEplus	440	550	500	650	500	650	500	650	500	550
1309 TVEplus	530	650	600	800	600	800	600	800	600	650
1310 TVEplus	725	850	750	1000	750	1000	750	1000	750	850
1512 TVEplus	950	1200	1050	1400	1050	1400	1050	1400	1050	1250
1714 TVEplus	1250	1550	1400	1800	1400	1800	1400	1800	1400	1750
1716 TVEplus	1500	1900	1800	2200	1800	2200	1800	2200	1800	2000
2018 TVEplus	1900	2400	2200	2800	2200	2800	2200	2800	2200	2500
2021 T-VEplus	2400	3000	2800	3500	2800	3500	2800	3500	2800	3300
2325 T-VEplus**	3200	3700	3600	4000	3600	4700	3600	4700	3600	4000

*) all throughput capacities are examples, throughput capacity depending on material properties such as residual moisture, print, degree of contamination, etc.

**) only regrind monopolymer application possible

Headquarters & Production Facilities

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