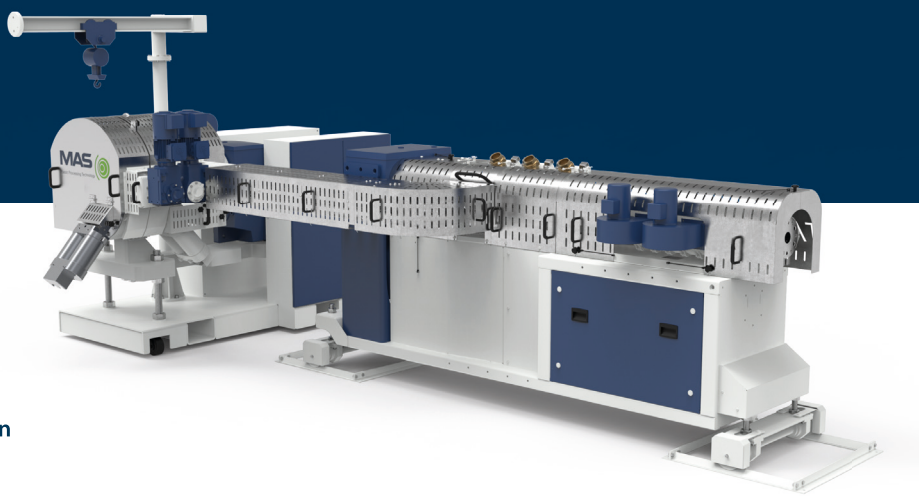
Optimized.
Sustained.
Productive.

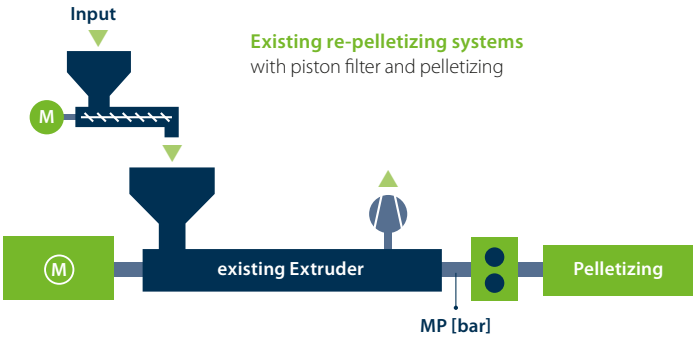
MAS
Plastic Processing Technology

Upgrade-Line CDF & Cascade



CDF & Cascade for existing Extruder

Common re-pelletizing systems with a set-up of Recycling Extruder + Melt Filter + Pelletizing System are often limited with regards to possible throughput (kg/h) and the quality of the generated granulate.



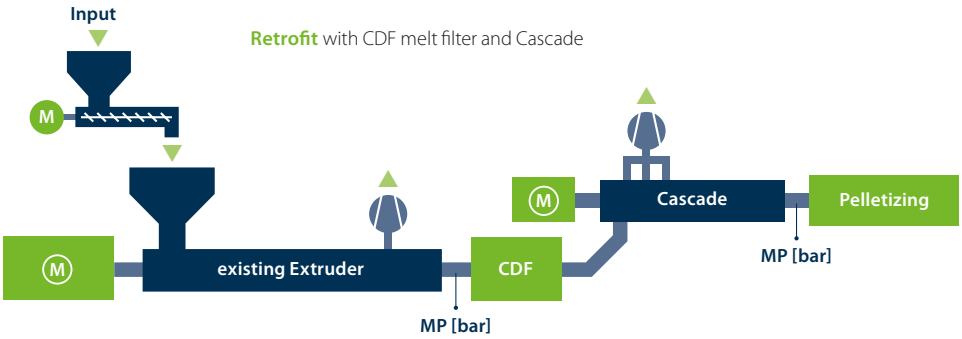
Existing re-pelletizing systems
with piston filter and pelletizing

Most common reasons for this are:

- High melt pressure must be built up by the Extruder to provide the necessary pressure for the Melt Filter and the Pelletizer.
- High melt temperature which degrades the polymer, as well as using high energy consumption (kwh/kg).
- Risk of melt escaping from the degassing port if the melt pressure reaches a certain level.
- Insufficient degassing, due to melt filtration being downstream of melt degassing; impurities can generate gas in the melt after degassing section.
- The existing melt filter is at its capacity limit, or is not really suitable for recycling applications
- Frequent changing of filter screens resulting in high personnel costs.

MAS increases the throughput and improves the quality:

MAS provides the perfect solution for existing Extruders, resulting in increased throughput, and production of perfectly degassed granulate of best quality.



Retrofit with CDF melt filter and Cascade

Existing filter can be replaced by the patented MAS filter Type CDF (**C**ontinuous **D**isc **F**ilter), which was developed especially for recycling applications to remove impurities such as wood, paper, non- melting plastics, rubber and similar contaminations from the melt. Due to the continuous operating principle the time- and labour-intensive exchange of mesh filters can be reduced to a minimum.
A short single Screw Extruder (standard l/d ~13,5), installed downstream of the CDF Filter, equipped with a highly efficient, patented degassing zone, ensures highest venting quality.
The purpose-built venting zone of the Cascade Extruder is equipped with a melt diverter segment. This feature, in combination with a tailored design of screw geometry provides a dynamic and continuous maximum melt surface. Three large venting ports paired with the relevant vacuum pump performance, provide extremely high venting efficiency making it suitable for the most difficult degassing applications.

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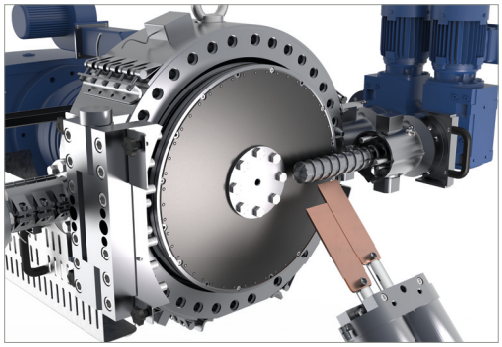
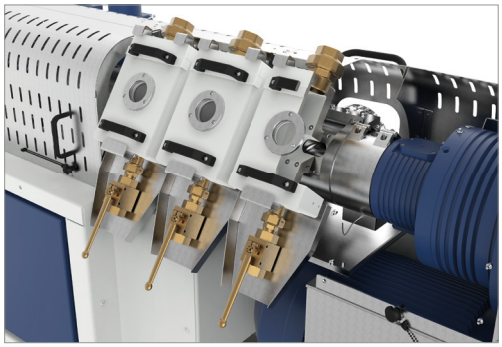
An upgrade with a CDF Filter and a MAS Cascade Extruder offers decisive advantages:

- The existing Extruder only has to build up melt pressure for the filtration. Therefore the Extruder can be operated with more throughput, less melt pressure and less melt temperature.
- The melt filtration happens before the degassing zone (Cascade). Therefore impurities, that can lead to gassing behaviour in the melt, like wood or paper, are removed before the degassing zone
- The melt in the degassing zone is free of impurities. A safe operation, without variations in quality is guaranteed.
- The melt pressure required by the Pelletizer, is built up by the Cascade. The Melt Filter is operated with lower pressure. Therefore a better filtration with longer life time of the filter screens is achieved.
- If needed an additional filter can be installed between Cascade and Pelletizing Unit (two stage filtration)



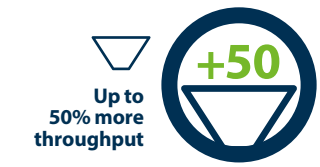
The big screen surface results in a low melt pressure and therefore in a long life time of the filter discs.



The efficient degassing provides the best possible pellet quality and increases the density up to 15%.

Implemented upgrades have shown that up to 50% more output can be reached, producing perfectly degassed granulate with high density.

An upgrade of your extruder by MAS will increase your throughput, improve your quality and will result in more sustainable profit.



Line Name	Filter	Cascade	Throughput up to [kg/h]
MAS Upgrade line 1200	CDF 500	TA 140	1,200
MAS Upgrade line 1400	CDF 500-D	TA 140	1,400
MAS Upgrade line 2200	CDF 500-D	TA 180	2,200
MAS Upgrade line 3500	CDF 500-DP	TA 180	3,500

Benefit with MAS:
Further advantages, detailed explanations of the key figures and the level of performance of MAS can be found at::