

NEXT GENERATION RECYCLING- MASCHINEN GMBH

Foundation

- 1996

Turnover

- 23 million €

Employees

- 70

Branches

- Reprocessing of thermoplastic waste of conventional and biodegradable plastics

Key materials

- Starch-based biopolymers
- PLA

Key products

- Recycling machines



Company

NGR – simply one step ahead: NGR stands for Next Generation Recycling Machines. This is the company name, as well as it stands for its innovative technology. NGR builds machines for the reprocessing of thermoplastic waste of conventional plastics as well as Biodegradables.

With NGR's ONE-STEP technology, a patented cutter-feeder-extruder combination, there is no additional pre-cutting systems necessary. Without ever leaving the machine nearly every thermoplastic material can be pelletized back to high quality raw material. As a result reprocessing costs are low and manpower requirement reduced to a minimum. Due to the gentle extrusion process which ensures minimum degradation of the material NGR recycling machines are also very well proven on biodegradable plastics.



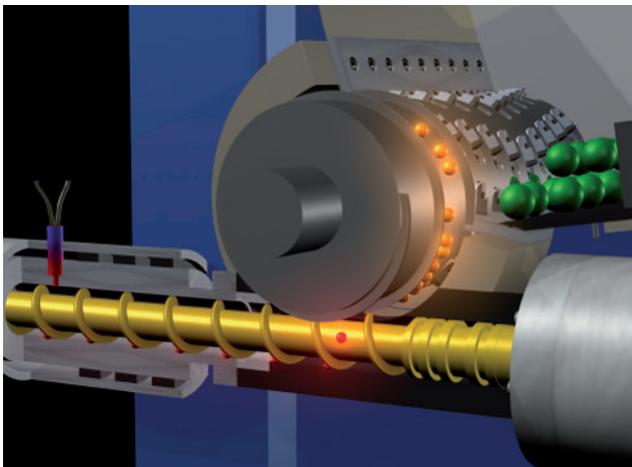
Products

Recycling of bio-based production waste: In most plastics production processes there is waste coming along with the products that converters aim at. Experience shows that in most of the cases 2 to 10% of the production material is lost due to process reasons. The easiest way of recovering this material is to shred it to chips and refeed them to the process together with the new material, but as easy as that is, it can lead to different process difficulties.

In many cases it is favourable to use a recycling extruder, bringing the material back to melt and then to pellets that are of the same quality as the virgin material. The choice of the optimal recycling technology is mainly driven by the objective to bring the material through the process without damaging its chemical and physical properties. Some conventional plastics even have to be handled with care during processing in order to avoid material degradation. The more this is an issue for most biopolymers, some of them being processed at relatively low temperatures of 140°C or being very sensitive to oxidation due to being exposed to air when heated.

NGR's recycling solution: NGR recycling machines with an output range from 20 to 2,000 kg/h feed the material to the extruder by an integrated cutter-feeder, which consists of a slow rotating cutter shaft with knives that cut against fixed knives like a scissors and a feeding zone that conveys the material to the extruder without pre-heating it.

NGR expects that with the increasing use of biodegradables, recycling of processing waste will gain further importance. So, NGR see themselves well prepared for the actual and future demands of these applications.



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