



FILM SERIES
CHOPPER-FEEDER-EXTRUDER COMBINATION

E:GRAN

- > ONE-STEP Technology
- > High Performance for a small floor space requirement
- > One-button automatic On/Off control
- > For automatic inline production

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NGR [®]
RECYCLING MACHINES
MEMBER OF NEXT GENERATION GROUP

THE OPERATING PRINCIPLE OF E:GRAN

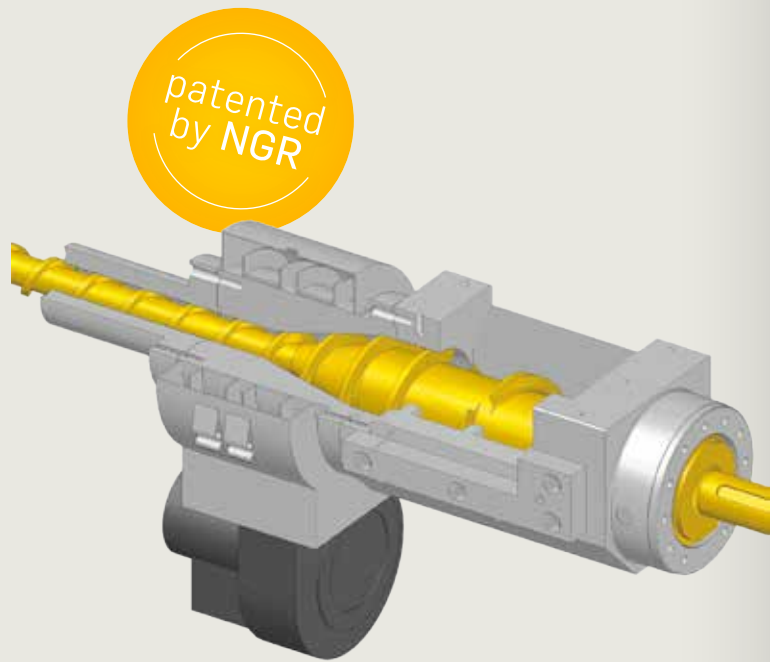
Plastic film and film edge trim are chopped directly in the extruder feed section. The conically shaped conveying area of the screw compresses the material as it enters the extruder.

In the extruder, the material is brought to a uniform melt temperature and subsequently pelletized.

The feed section (where the material is chopped), conveying area and the extruder all lie along a single shaft. The resulting design requires only one energy-efficient drive.

All the components are positioned in close proximity to prevent oxidation of the material and to make optimal use of heat from the chopping process.

All models in the E:GRAN series feature this patented chopper/feeder/extruder combination.



ONE-STEP TECHNOLOGY

In a single step process, the film edge trim is chopped directly in the extruder feed section and fed into the extruder.

ONE-BUTTON AUTOMATIC ON/OFF CONTROL

- > Convenient startup and shutdown
- > Restart after unplanned shutdown in less than two minutes with full extruder
- > The control system provides for smooth start-up of equipment components

HIGH PERFORMANCE FOR A SMALL SPACE REQUIREMENT

With its compact design, the system can be installed in areas of limited space and its versatility also allows it to be integrated at a later time in the main process.

FOR AUTOMATIC INLINE PRODUCTION

- > Automatic response to differences in quantity when processing edge trim ensures consistent pellet quality

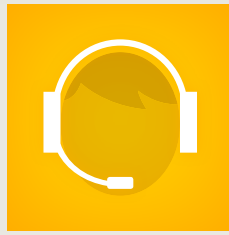


HIGH-GRADE RAW MATERIAL

High quality recycled pellets tested to standard EN 15343 et seq.

Very short residence times between shredding and pelletizing

High-performance filtration and degassing of the melt stream



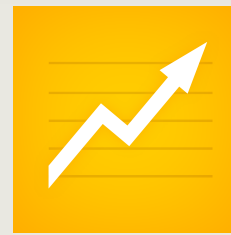
CUSTOMER SERVICE

Test runs with your material at one of our customer care centers

Expert advice in waste management from choosing the right equipment to financing

Commissioning by qualified technicians, rapid on-site service, and internet-based remote maintenance

High availability of spare parts through regional warehouses

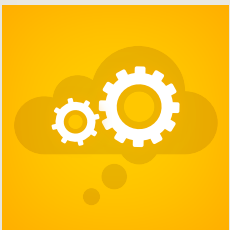


INCREASE PROFITS

Low operating costs with high plastics throughput, minimal power consumption, and easy operation

Space-saving integration in your material logistics chain

Long service life based on solid engineering and high-quality construction

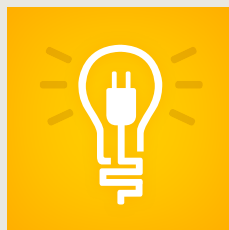


INNOVATIVE TECHNOLOGY

Modular design and platform technology

Customized solutions for your post-industrial or post-consumer plastic waste help you achieve maximum yield

Continual developments in technology keep your waste management solution on the cutting edge



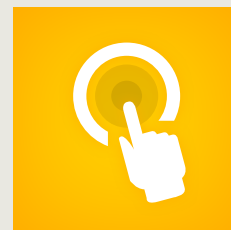
POWER INTELLIGENCE

Power Intelligence is a key concept in the design of high-performance equipment with minimal power and resource requirements

Use of the heat from the shredding process

Closed loop cooling water system

Control unit provides power management



EASY OPERATION

The central operating element controls all equipment functions from feeding to pelletizing, etc.

Easy-to-operate equipment

Simple servicability, allows for fast change of material

The computer-controlled system optimizes the processing steps and stabilizes process parameters

APPLICATIONS



1. Sample stand-alone application: Feeding defective film via a roll feeder
2. Sample in-line application: Feeding film edge trim via the air separator

FEED-IN



1. AIR SEPARATOR

The air separator is used in the production process to continuously recycle film edge trim. With inline operation, further material handling is unnecessary and the NGR recycling unit is fully automated.

2. ROLL FEEDER

The roll feeder pulls scrap from rolls for processing.





Solid engineering, high-quality materials and precise execution ensure a long service life for equipment.

Maintenance-friendly access to moveable parts allows you to quickly change material, efficiently disassemble and assemble wear and tear parts, and minimizes downtime.



EXTRUDER SCREW

Specially developed for the challenges of recycling, the extruder screws provide optimum melt homogeneity and process material efficiently with minimal loss of physical properties.

OPTIONS



1. DEGASSING

Particularly when processing multi-layer film, degassing is recommended.

2. MANUAL SCREEN CHANGER

Using the manual lever, two screens can be swung out alternately to allow for filtering of the melt stream. For automatic filtering of the melt stream, a high-quality two-piston continuous melt filter is recommended. This enables the screens to be changed at the pistons without interrupting the process.



CONTROL UNIT

All equipment functions from feeding to pelletizing are controlled automatically from the easy-to-read NGR touchscreen.

Recipes are managed in the operator control unit, which increases traceability, provides ease of use, and ensures equipment parameters are set properly.

PELLETIZATION

1



2



3



1. AIR PELLETERIZER (AP) 10 - 50 kg/h
The pellets are discharged and cooled in the air stream.

2. AIR PELLETERIZER (AP) 50 - 120 kg/h
The pellets are discharged and cooled in the air stream.

3. HOT DIE-FACE PELLETERIZER (HD)
HD pelletizing is used for thermoplastics of all types, except for PA 6,6, PET and PBT melts of lower viscosity. Your employees will benefit noticeably from quick and easy configuration of cutter blades, their long periods of use, and the ability to set blade pressure.

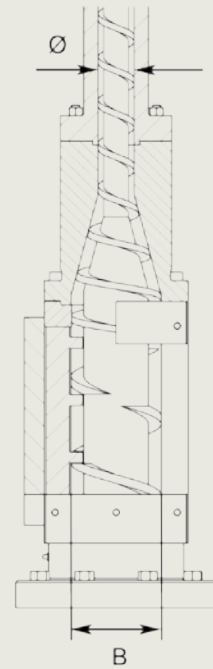
PELLETS



In addition to high quality, the uniform pellet size also provides for homogeneous mixture in new material. NGR thus plays an indirect role in ensuring consistent quality in the final product.

E:GRAN

	Ø [mm]	B [mm]	max* [kg/h]	max* [lbs/h]
E:GRAN 50-12	50	120	50	110
E:GRAN 75-16	75	160	120	270



* Output values for LDPE according to NGR company standard, depending on material and quality.

In addition, NGR provides all the equipment for conveying pellets such as blower, pipes, cyclones and much more.

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