

RECYCLING MACHINE

# E:GRAN

50

IS DESIGNED FOR ...

- ...film edge and bleed trims from blown or cast film line
- ... film roll scrap
- ...granulate output of 20 –110 lbs/hr

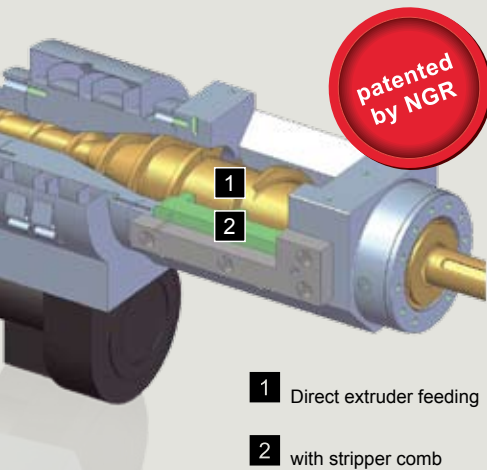


E:GRAN 50 AP

# QUALITY | AMORTISATION

## Ingenious design

The E:GRAN has been developed for inline repelletizing of film edge and bleed trims from a blown or cast film line. NGR has created and patented a new feed design for the direct induction of the film into the extruder. Throughput fluctuations in the extruder (so-called surging) are thus minimized and the reprocessed pellets are uniform in shape and free of air pockets.



- 1 Direct extruder feeding
- 2 with stripper comb

## Designed and built for long-term profitability

Robust design, high-grade materials and top quality manufacturing in combination with the finest possible controls and proven electronics, guarantee a long service life that extends far beyond the short payback period. It is then that NGR machines pay for themselves over and over again, as hundreds of operators on every continent can confirm.



Easy-to-use Operator Controls

## Especially for blown film

E:GRAN is able to convert the edge strips from PE film production\* into high quality pellets in a very simple and cost-effective manner. Both material feeding systems can be used simultaneously for this purpose.

- The continuous ribbon edge and/or bleed trims are blown into the extruder feeding zone using an air separator to remove the **transport air**.
- Roll stock (startup or changeover scrap) can be fed into the system using a roll **feeder intake**. The E:GRAN controls are simple and respond automatically to normal process fluctuations in the incoming material volume.

## Automation for inline operation

The E:GRAN machine can be fully integrated into the process used in a film production plant. This ensures safe and cost-effective inline operation. The system is designed for continuous feeding in inline operation, but is also able to react automatically to any changes in material quantity due to edge trims and can therefore deliver pellets of uniform high quality. To this end, the screw and pelletizer speeds are controlled automatically.

## Simple maintenance and long operating periods

A high degree of process stability minimizes the influence of the operating personnel on pellet quality. NGR designed the E:GRAN with simple access to wear parts to reduce scheduled downtime to a minimum.



Pellets produced from PE film

## High-quality pellets means high-quality end products

The NGR design principle produces pellets with minimum degradation. This allows you to achieve the highest value end-use for your scrap and often allows you to use your repelletized scrap at full value to virgin resin in many products. The low speed drum shreds the material, which is then fed directly into the extruder without losing the frictional heat generated during the cutting process. The gently melted plastic produces high material quality with minimal loss of physical characteristics.

“Old technology” recycling systems can have a major negative effect on polymer quality. Undesirable deviations such as losses in viscosity or discoloring can reduce the value of the scrap material, and reduce the possibilities for its reuse.



Maintenance opening

\* Also coextruded films, such as those with a PA (Nylon) inner layer.

# FEATURES | OPTIONS

## 1 Air separator (Trim Receiver)

Film edge and bleed trims are carried in continuous ribbon form to the E:GRAN using air transport. The air separator, which is mounted above the feed opening, separates the trims from the air.

## 2 Roll Feeder

This consists of a feed hopper with electrically-driven film intake rollers, which are process controlled. Allows the processing of startup and changeover scrap rolls.

## Manual screen changer (Melt Filter)

A lever is used to allow the alternate changing of two screens, which are swung out of the plastic melt. A melt filter is not needed for normal in-line operation as the trims are clean. A filter is only needed when the E:GRAN is fed mainly with rolls that have been in contact with dust and dirt.

## 4 Venting/Degassing unit

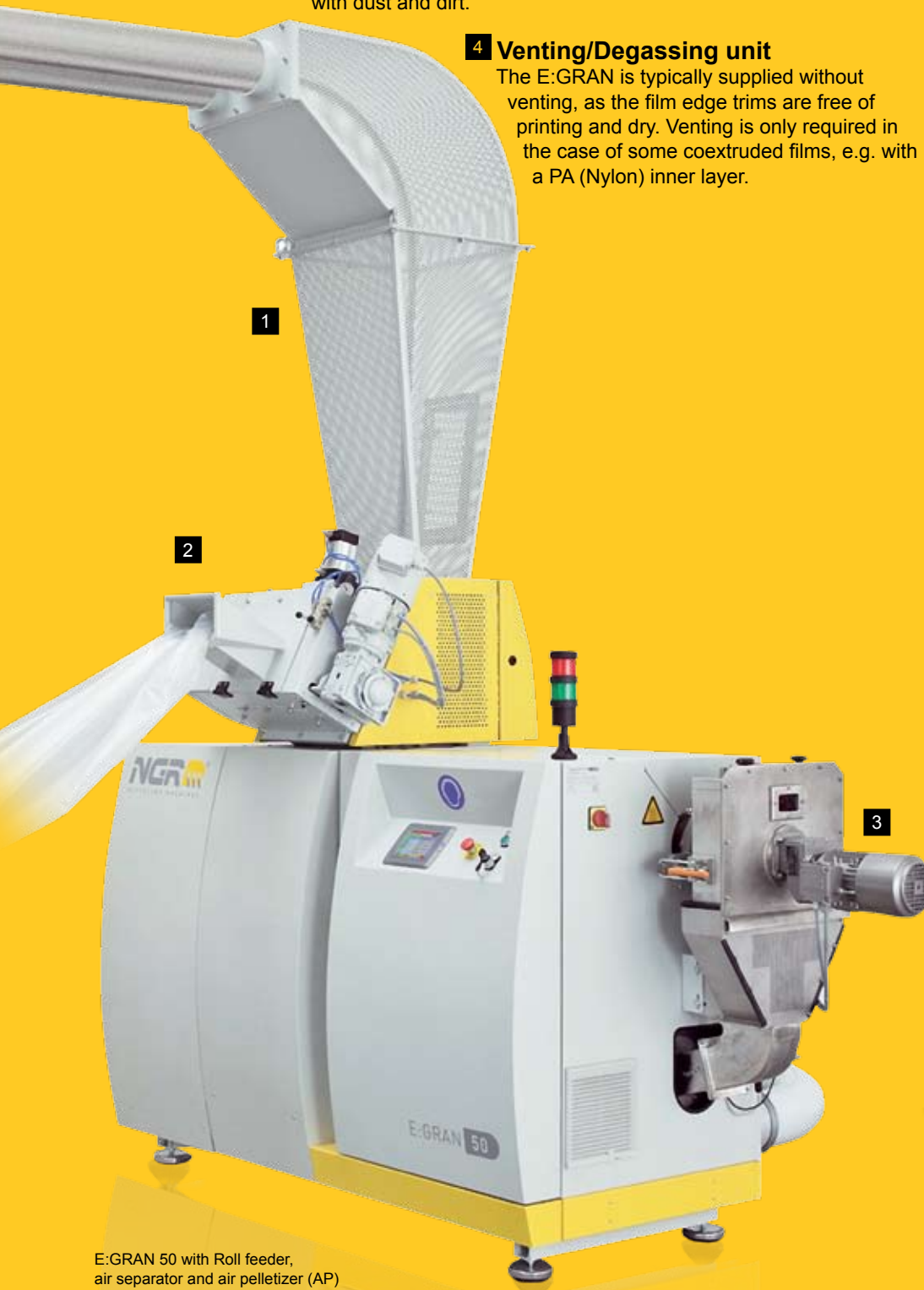
The E:GRAN is typically supplied without venting, as the film edge trims are free of printing and dry. Venting is only required in the case of some coextruded films, e.g. with a PA (Nylon) inner layer.



Simple-to-clean!



Degassing



## GRANULATION SYSTEM – process controlled

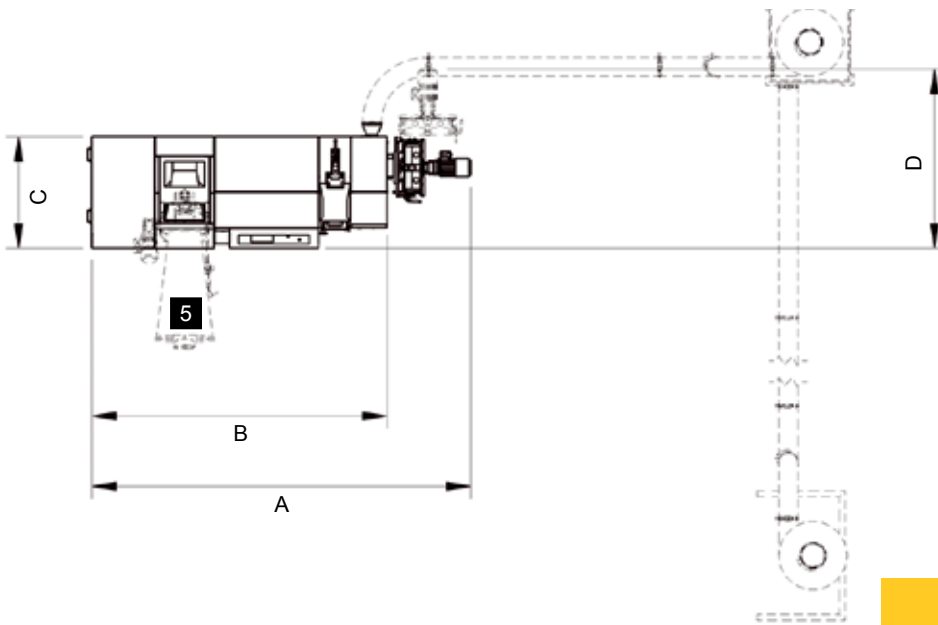
### 3 Air Pelletizer (AP)

The pellets are cut by a rotating knife as they exit the die, then they are cooled as they are conveyed by the air stream to the pellet storage area.

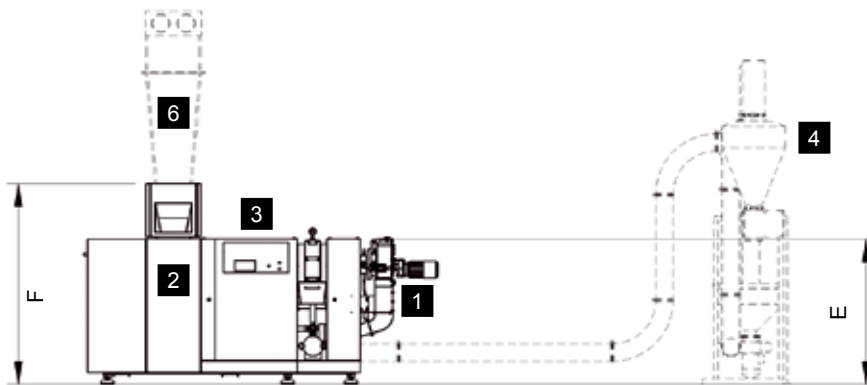
### Hot die pelletizing (HD)

The pellets are cut by a rotating knife as they exit the hot die, then they are flung into a water stream for cooling, transported to a centrifugal dryer for removal of the moisture, and then conveyed using air to the pellet storage device.

Typically, NGR supplies the entire pellet transport equipment such as blowers, piping, cyclones, etc.



- 1 Pelletizer
- 2 Direct film feeding / Extruder combination
- 3 Operating terminal
- 4 Cyclone (optional)
- 5 Roll feeder
- 6 Air separator



type		E:GRAN 50	
venting option		Basic	V
output of pellets *)		lbs/hr	110
cutter	cut width	inch	13
	extruder	screw diameter	inch
	screw length	L/D	17   31
	motor	hp	29
	screw speed	rpm	161
dimensions	A	inch	104   132
	B	inch	76   104
	C	inch	37
	D	inch	60
	E	inch	53
	F	inch	73
weight **)		US t	1,8   2,1

US t ... US tons, hp ... hp@60 Hz, rpm ... rpm@60 Hz  
 \*) output for LDPE according to NGR standards, material and form.  
 Values are ,up to'  
 \*\*) approx. value for transport; depending on chosen executions  
**standard execution:**  
 Basic ... short screw without venting  
 variable screw speed with frequency converter as standard  
**additional options:** V ... single vacuum venting

## WE TAKE CARE OF YOUR PLASTIC WASTE

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