FLAKE SERIES
FEEDER-EXTRUDER COMBINATION

F:GRAN

> Automatic feeder screw control
> Anti-Bridging Silo
> One-button automatic On/Off control
> DUMP and RUN operation

www.ngr.at

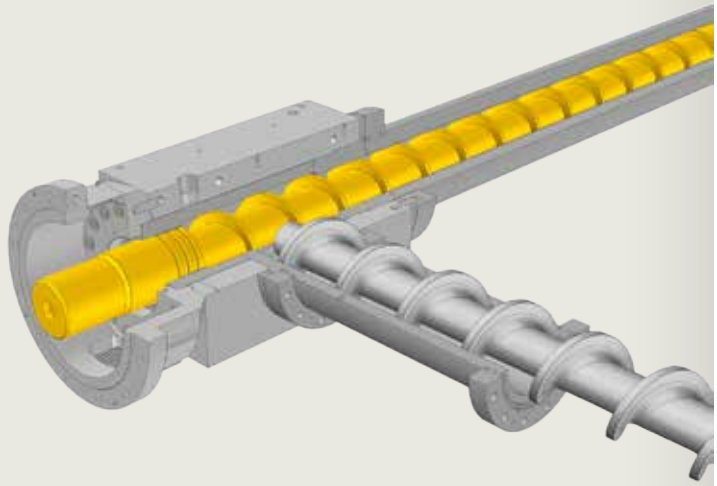
NGR®
RECYCLING MACHINES
MEMBER OF NEXT GENERATION GROUP

THE OPERATING PRINCIPLE OF F:GRAN

In the anti-bridging silo, rotors keep the plastic flakes in motion. This prevents the flakes from bridging and ensures flowability.

In the transition area between the flake conveyor and the extruder input, the feeding screw acts like a feeder. The flakes are gently transported continuously from the large-dimensioned feeder screw into the extruder. This arrangement facilitates the processing of flakes of different sizes (the flake size is of minor importance). The pressure on the plastic flakes increases steadily as they enter the extruder intake, in order to achieve high throughput rates.

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



AUTOMATIC FEEDER SCREW CONTROL

The feeder screw is automatically activated depending on the utilization of the extruder capacity. This ensures an optimized throughput without operator interference saving on labour costs.

ANTI-BRIDGING SILO

The anti-bridging silo is used to store the plastic flakes and is equipped with rotors to prevent the flakes from bridging.
Located directly over the feeder screw, the anti-bridging silo ensures a continuous supply of flakes.

ONE-BUTTON AUTOMATIC ON/OFF CONTROL

> Convenient startup and shutdown

> Restart after unplanned shutdown in less than two minutes with a full feeder screw and full extruder

> The control system provides for smooth start-up of equipment components

DUMP AND RUN OPERATION

> The material level in the anti-bridging silo is constantly measured and the feed is regulated accordingly

> Discontinuous filling of the anti-bridging silo is possible – the NGR control unit does the rest

HIGH-GRADE RAW MATERIAL

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

Efficient processing ensures that materials retain their properties

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

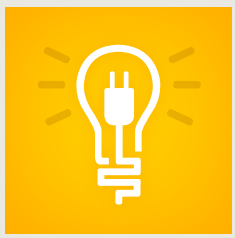
Long service life based on solid engineering and high-quality construction

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

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

MATERIALS


1


2


3


4

1. Shredded plastic bags
2. Plastic flakes from washing lines
3. Transparent flakes
4. Agricultural film flakes from washing lines

Other materials, fluff or flake sizes upon request.

FEED-IN

1

1. ANTI-BRIDGING SILO
The anti-bridging silo serves as a storage container for the plastic flakes. Equipped with a filling level control, the feeding with flakes can be automated.

The rotors in the anti-bridging silo prevent the flakes from bridging. This ensures a constant stream of raw material to the machine. The anti-bridging silo can be designed with a storage capacity of up to 30 m^3.

The solidly designed feeder screw transports the plastic flakes to the extruder. Before the extruder intake, pressure is continuously built up on the flakes.

In this section, the feeder screw acts like a feeder, which supports the feeding into the extruder intake and thus ensures high throughput rates.

EXTRUDER SCREW

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

For special requirements, our expert NGR engineers develop custom-tailored screw geometries.

OPTIONS

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.

1

2

3

1. DOSING
Additives can be mixed into the material stream on a process-controlled basis.

2. DEGASSING
Depending on the level of contamination and volatile matter in the melt flow, single or double venting is applied. Vacuum-supported venting provides improved degassing for critical applications.

3. BRITAS AUTOMATIC BAND-MELT-FILTER
The BRITAS automatic band-melt-filter provides excellent filter results with high throughput rates when processing heavily contaminated material. In addition, the filter also convinces by its minimal melt loss and low filter costs. The fully automatic operation also helps to minimize operating costs. Depending on the application, common piston type screen changers can be integrated.

PELLETIZATION

1

2

1. HOT DIE-FACE PELLETIZER (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.

2. AUTOMATIC STRAND PELLETIZING (A-SP)
Strand palletizing is used for low-viscosity melts. Uncomplicated operation helps produce uniform and dust-free cylindrical pellets with excellent mixing properties.

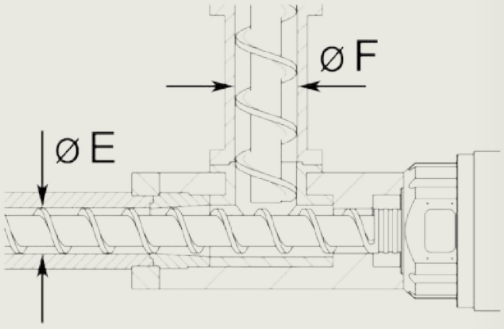
PELLETS

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.

NGR®
RECYCLING MACHINES
MEMBER OF NEXT GENERATION GROUP

F:GRAN

	ØE [mm]	ØF [mm]	max* [kg/h]	max* [lbs/h]
F:GRAN 95-20	95	200	500	1100
F:GRAN 105-20	105	200	600	1320
F:GRAN 125-20	125	200	800	1760
F:GRAN 145-20	145	200	1100	2420
F:GRAN 165-20	165	200	1400	3080
F:GRAN 165-25	165	250	1400	3080
F:GRAN 185-25	185	250	1700	3740
F:GRAN 205-25	205	250	2100	4620
F:GRAN 225-25	225	250	2600	5730



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

Depending on the application, we naturally can also integrate common piston screen changers.

Next Generation Recyclingmaschinen GmbH
HQ, Production & Customer Care Center Europe
Gewerbepark 22, 4101 Feldkirchen, Austria
Phone +43 (0) 7233 70 107-0, Fax -2

Next Generation Recycling Machines, Inc.
Sales & Customer Care Center America
3000 Center Place, Suite 100, Norcross, GA 30093, USA
Phone +1-678-720-9861, Fax -9863
Toll Free (USA only) +1-877-640-2828

info@ngr.at, **www.ngr.at**

Taicang Next Generation Recyclingmachines, Co., Ltd.
Sales & Customer Care Center China
No.6, Wuxi Road, Taicang Economic Development Zone,
Taicang, Jiangsu 215400, China
Phone +86 (0) 512 536 52-100, Fax -332

04 | 16, EN

NGR RECYCLING MACHINES
MEMBER OF NEXT GENERATION GROUP