SIEMPELKAMP
SIZE REDUCTION

Intelligent engineering
for future generations.

AGGLOMERATION

Economical and ecological agglomeration of plastics

100% UTILIZATION OF PLASTICS

During the production and processing of thermoplastics, production waste occurs. The Plast-Agglomerator processes this waste into free-flowing granules which are reused for production as valuable raw material. Film- fiber- and foam waste is converted into free-flowing granules by means of the economical process.

Thermoplastic- as well as composite materials, dry or moist, can be continuously recycled with the same system.

This is performed with a minimum of thermodegradable damage. The plastic granules are plastified by means of frictional heat to right below the melting point, ensuring efficient agglomeration without thermal degradation.

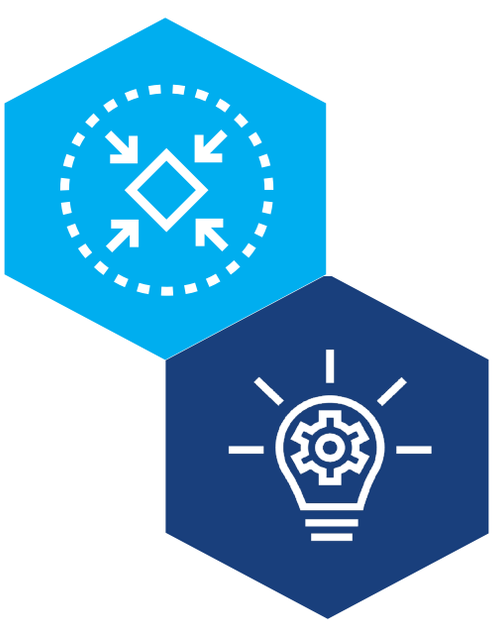
SOME ADVANTAGES OF OUR SYSTEM

- Excellently free-flowing agglomerate with high bulk density
- Material-gentle agglomeration by means of frictional heat
- Continuous, fully automatic process
- Fully automatic start from a cold condition
- Starting time less than 5 minutes
- Feed material with a residual moisture content of up to 15% can be processed
- Suitable for compounding of different feed materials
- Low cleaning requirements
- Low space requirement due to compact and modular design

THE PLAST-AG-GLOMERATOR CONSTRUCTION

The worldwide proven system for the continuous production of free flowing granules from thermoplastics of all kinds.

The Plast-Agglomerator, type PFV is available in different sizes with throughput capacities from 100 to over 2000 kg/h

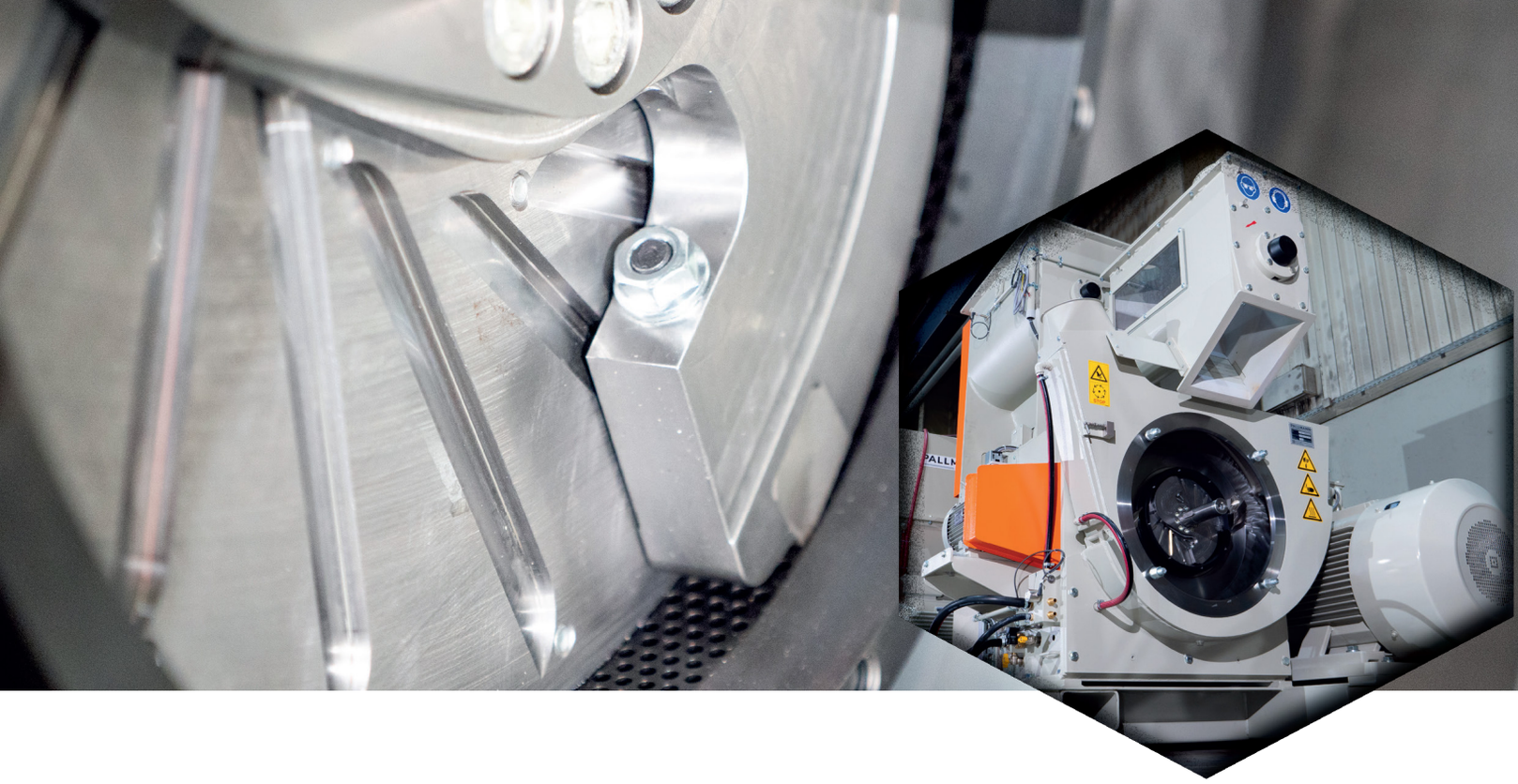


The agglomerator with its feed hopper is the main part of the Plast-Agglomerator System. The Agglomerator is in sturdy sheet metal construction. All building components are designed for rough 3-shift operation (24/7) and are easily accessible for maintenance purposes.

The front door with the feed screw slides open sideways and thereby allows quick and easy access to the agglomerating elements. Fumes and odors from water, spinning oils, foaming agents, printing ink etc. can be vented at a central location.

The feed hopper, in sturdy sheet metal construction, with horizontal agitators for anti-bridging and with a discharge screw, is a self-contained unit. The cleaning door allows quick and easy access to the inside of the feed hopper.

The doors are secured with safety door lockings to avoid unintentional opening. Options like low and high level indicators, pressure sensors, speed control, construction in special materials, base frame with integrated cabling and cool water connection, accessible service platforms with ladders etc. are available.



PRINCIPLE OF OPERATION

The feed material is fed into the agglomerating chamber by means of a dosing screw. Frictional heat and high pressure, produced between the agglomerating vane and the die, agglomerate the material and press it through the special hole size of the die.

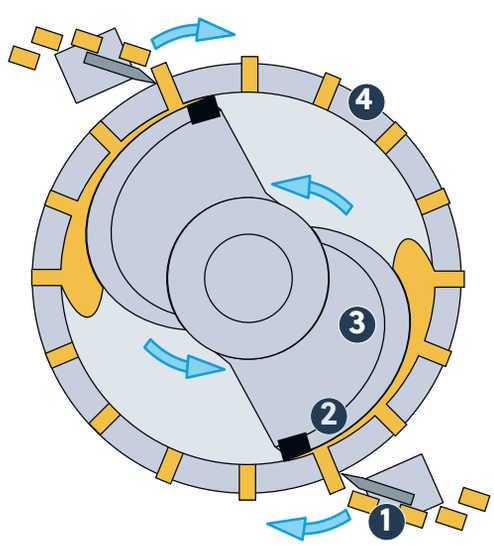
The processing temperature is right below the melting point of the corresponding plastic material. Material penetrating the die is cut by rotating knives and conveyed by the cooling air of a fan into the hot-melt granulator where the material is cut to equal sized granules.

The hole size of the selected screen installed in the hot-melt granulator determines the size of the granules.

THE CONTROL SYSTEM

The functions of all system components are controlled from a control cabinet. An overload control automatically regulates the material infeed to the agglomerator.

The system is controlled by means of a programmable logic controller (PLC).



1. Knives 2. Pressure piece 3. Agglomerating wing 4. Die

TECHNICAL DATA

TYPE PFV			250	315	400	500
Drive, Agglomerator		kW	90	110	200	250
Cool water consumption		l/h	700 - 1100	700 - 1100	700 -1100	700 -1100
Drive, hot-melt granulator		kW	30	45	55	75
Total installed power		kW	ca. 145	ca. 185	ca. 290	ca. 365
Dimensions	Width	mm	7000	8000	8500	8500
	Depth	mm	2500	3000	3500	3500
	Height	mm	5500	6000	6500	6500

	Bulk density endproduct g/l	Capacity up to (kg/h)			
HDPE-Film	350	500	800	1200	2000
LDPE-Film	430	500	800	1200	2000
PE-foam	300	300	500	800	1300
PE-fiber	400	300	500	800	1300
PP-film	350	300	500	800	1300
PP-fiber	330	250	450	700	1100
PS-film	450	500	700	1000	1400
EPS	500	500	700	1000	1400
XPS-foam	430	500	700	1000	1400
PVC-rigid-film	600	600	900	1200	1800
PVC-soft-film	540	700	1000	1400	2100
PVC-soft foam	470	600	900	1200	1800
ABS-film	410	600	900	1200	2000
PA-film	450	400	600	1000	1500
PA-fiber	430	400	600	1000	1500
Polyester-film	475	300	500	800	1300
Polyester-fiber	480	300	500	800	1300
PET-foam	370	450	700	1000	1400
PET - flakes	500	600	900	1200	1800
PMMA	480	400	600	1000	1500
PC-film	500	400	600	1000	1500
PLA-foam	430	400	600	1000	1500
Carpet waste	370	500	700	1100	1500
Wood-plastic	350	500	700	1100	1500
Synthetic rubber	400	700	1000	1400	2100

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PALLMANN
MASCHINENFABRIK
HAS EVOLVED

INTO

SIEMPELKAMP
SIZE REDUCTION

NEW NAME. PROVEN STRENGTH.

ANY QUESTIONS?
WE'VE GOT ANSWERS

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