PALLMANN

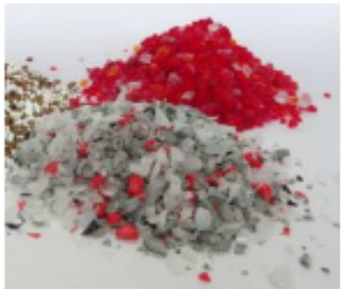
TOP PERFORMANCE IN SIZE REDUCTION

Preparation of Plastics

Quality granules for unlimited applications

100 % Utilization of Plastics

For the economical size reduction, PALLMANN offers specially developed Ultra-Granulators®, series H. Due to the variety of materials, their form and constitutions, PALLMANN supplies machine technology suited for the corresponding application. The knife mills stand out due to the robust welded construction, electro dynamically balanced rotors and simple maintenance. High throughput rates at high availability are achieved in rough, every day production.



Ultra-Granulator® PS-H

Type PS-H		400 x 500	500 x 700	600 x 900	800 x 1100	1000 x 1400
Rotor diameter	mm	400	500	600	800	1000
Rotor length	mm	500	700	900	1100	1400
Rotor type		FW 4	FW 4	FW 6	FW 6	SD 9
Drive, main motor	kW	30 - 55	55 - 75	75 - 90	75 - 160	75 - 200
Wear resistant version		*		*		*

* Throughput rate heavily depends on feed material and desired particle size

Proven grinding systems for rubber

Size reduction of rubber

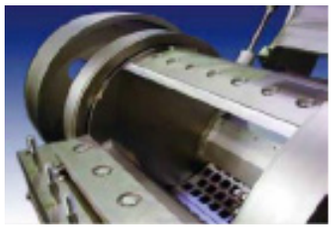
For the economical size reduction of natural and synthetic rubber of any kind in form of bales, sheets or chips, vulcanized or unvulcanized, with or without textile reinforcement, PALLMANN offers Ultra-Granulators®, series PS-C.

PALLMANN has specifically designed guillotine rotors, in completely open design without central rotor shaft and with high rotor inertia. Thanks to the patented feeding system, also extremely difficult temperature-sensitive material can be reduced in size. Well proven metering and recovery systems are available for any type of application.

Standard one-, two- or three-step size reduction system can be offered. We specialize in custom-designed complete production lines.

Ultra-Granulator® PS 4 - 5

Ultra-Granulator® PS 8 - 12



Type PS		4 x 5	4 x 7,5	6 x 6	6 x 9	8 x 12
Scale up factor	f	1,0	1,4	1,55	2,2	3,7
Rotor diameter	mm	400	400	600	600	800
Rotor type		G 3	G 3	G 3	G 3	WG 6
Drive, main motor	kW	55	55 - 75	75 - 90	75 - 110	132 - 250
Throughput rate	kg/h	200 - 2000	300 - 2500	350 - 3000	450 - 4000	700 - 7000

* Throughput rate heavily depends on feed material and desired particle size

Industrial Granulators

Ultra-Granulator® PS

Nowadays there is a steadily increasing demand for larger plastic parts and abrasive material recycling in any field of the plastics- and chemical industry. The thereby resulting valuable recycling of these material quantities requires the utilization of larger, more efficient and also wear-resistant Ultra-Granulators®.

PALLMANN´s decades of experience in manufacturing these machines guarantees decisive competitive advantages.

PALLMANN supplies Ultra-Granulators® specifically adapted to each application, that reliably size reduce anything which can be cut. PALLMANN Ultra-Granulators® are corresponding to this requirement.

Ultra-Granulator® PS - M

Ultra-Granulator® PS - B

Type		PS - M 500 x 700	PS - B 630 x 1000	PS - B 800 x 1250	PS 8 x 12
Rotor diameter	mm	500	630	800	800
Rotor length	mm	700	1000	1250	1200
Rotor type		G 3 + F 3	FS 8	FS 8	A 6
Drive, main motor	kW	37 - 45	37 - 55	45	75
Wear resistant version		*			

* Throughput rate heavily depends on feed material and desired particle size

Quality granules for unlimited applications

Size reduction of profiles

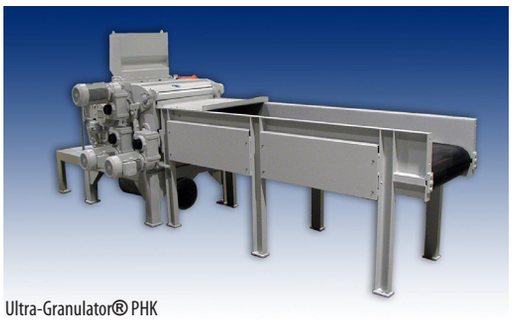
Production waste and cut-offs from the manufacture and preparation of items such as windows, shutters, siding profiles etc., are size reduced using the PALLMANN Ultra-Granulator®, type PSP. The horizontally fed profiles are automatically drawn in by means of the specially designed rotor. Short waste pieces can be fed either by conveyor or from the top. Size of the granulated material is determined by the screen hole size.

Ultra-Granulator® PSP

Size reduction of sheets and boards

Waste and rejects, occurring during the manufacturing and processing of sheets, whether massive of foamed can be size reduced by means of PALLMANN Ultra-Granulator®, type PHK or PS-P into granules of defined size.

A controlled material feeding via the upstream conveyor belt with a simultaneous horizontal feeding is possible due to the integrated draw in device.



Ultra-Granulator® PHK

Ultra-Granulator® PKH

Type		PSP 400 x 500	PSP 500 x 700	PHK 120 x 700	PS - P 600 x 900	PS - P 600 x 1500
Rotor diameter	mm	400	500	120	600	600
Rotor length	mm	500	700	700	900	1500
Rotor type		SW 8	SW 8	F 5	SD 5	SD 5
Drive, main motor	kW	37 - 45	37 - 55	45	75	75

* Throughput rate heavily depends on feed material and desired particle size

Trendsetting technology PALLMANN PolyGrinder ® type PKM

The steadily increasing demand for powders of plastic and rubber of any kind as well as the constantly expanding quality requirements with regard to flowability, bulk density, particle size distribution and grain structure call for pulverizing systems of most modern technology.

PALLMANN offers complete systems developed and proven in practical application. Standard systems are available for various requirements. With supplementary packages and numerous options, the systems can be easily adjusted to the individual demand.

The standard program fully corresponds to market requirements with regard to a complete range of pulverizing systems for all capacity requirements.

The pulverizing systems are available with or without screening unit in order to meet the demands of fineness.

Type		PKM 300	PKM 600	PKM 800
Grinding chamber diameter	mm	300	600	800
Motor, main drive	kW	37	75 - 110	90 - 132
Throughput capacity*	kg/h	150 - 200	450 - 650	750 - 1000
Total system capacity	kW	42	92 - 125	107 - 155
Dimensions	Width mm	2270	3100	4000
	Depth mm	2600	2800	4100
	Height mm	5150	5100	7300

* During pulverization of PE in rotational moulding quality, depending on material type

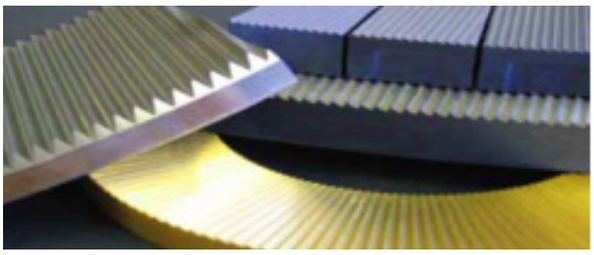
Pulverizing systems for masterbatch and compounding

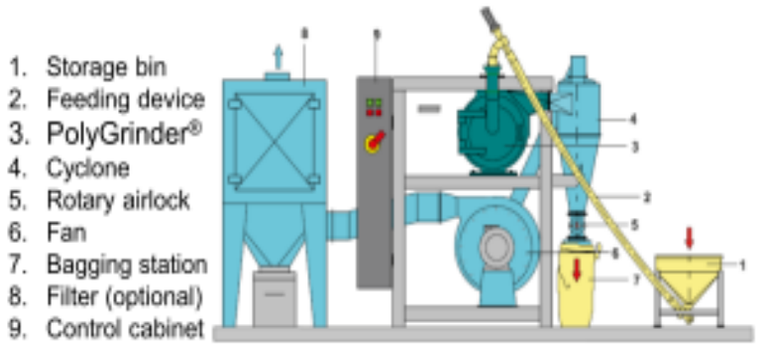
With the PolyGrinder®, type PM high quality powders are produced for masterbatch and compounding. The optimum particle size of the end powder guarantees good mixture and adhesion of the additives.

A wide spectrum of materials such as PE, PP, PA, PC etc. can be pulverized at ambient temperature.

The PALLMANN PolyGrinder®, type PM is robust and suitable for continuous operation. The patented design with eccentrically positioned grinding discs avoids material adhesion in the housing.

A central bearing with virtually zero play allows the precise setting of the grinding gap. The entire system is controlled fully automatic. The system is designed in such a way that the pulverizer itself, the piping and the cyclone are installed at a comfortable working height and can be quickly and easily cleaned.





Type		PM 300	PM 500
Grinding chamber diameter	mm	300	500
Motor, main drive	kW	30 - 37	45 - 55
Throughput capacity*	kg/h	50 - 300	150 - 600
Dimensions	Width mm	1500	1800
	Depth mm	1000	1100
	Height mm	3100	3500

* During pulverization of PE in rotational moulding quality, depending on material type

Quality powder for unlimited applications

PolyGrinder®, type PKM

The PALLMANN PolyGrinder® is used for the pulverization of plastic such as HDPE, LLDPE, PP, PVC, ABS, PA, PES etc. The pulverizer is also used in the rotational moulding industry for the production of masterbatch as well as for the recycling of granules of pipe- and profile waste. The PolyGrinder® produces high quality powders with high bulk density, narrow particle size distribution and an ideal flow rate.

Turbo Mill, type PP

Finest powders with excellent flowability are used in the textile and metal industry for surface coatings. PALLMANN is the contact address for the pulverization of these thermoplastics, as they are on average very difficult to pulverize due to their high MFR. These plastics are mainly LDPE, HDPE, PE, and EVA. Many of these materials can be pulverized on PALLMANN special mills under ambient conditions with no need for any cooling agents. The economic efficiency is foremost. This is a compact and efficient system to tackle this task.

Type		PKM 300	PKM 600	PKM 800	PP 6 S	PP 8 S
Power factor	F = approx.	0,4	1.0	1.8	1.0	1.7
Rotor dia	mm	300	600	800	600	800
Motor kW	kg/h	37	90	110	11 + 30	18.5 +45

* Throughput rate heavily depends on feed material and desired particle size

Proven grinding systems for rubber

Turbofiner®, type PLM

The Turbofiner® is a high-capacity size reduction mill for the production of finest powder qualities for soft to medium hard materials.

If the Turbofiner® is additionally equipped with a hot gas produce, the material can be ground and dried in one step.

Typical materials for the pulverization in the Turbofiner® are elastomers and plastics, composites and recycling materials.

Precision Knife Mill, type PS

Precision Knife Mills allow the processing of film in form of rolls, edgings and loose material, cellulose, linters, textiles as well as natural- and synthetic fibers, thereby producing finest powders with a smooth particle surface and high bulk density.

Furthermore, Precision Knife Mills are used for the recycling of valuable materials such as soft metal chips and foamed materials.

Type		PLM 800	PLM 1250	PLM 1800	PS 5 - 10	PS 12.5
Power factor	F = approx.	1.0	2.4	5.0	1.0	1.7
Rotor dia	mm	800	1250	1800	600	800
Motor kW	kg/h	45 - 90	132 - 200	250 - 315	37 - 55	75 - 110

* Throughput rate heavily depends on feed material and desired particle size

Agglomerates for compounding and plastic recycling





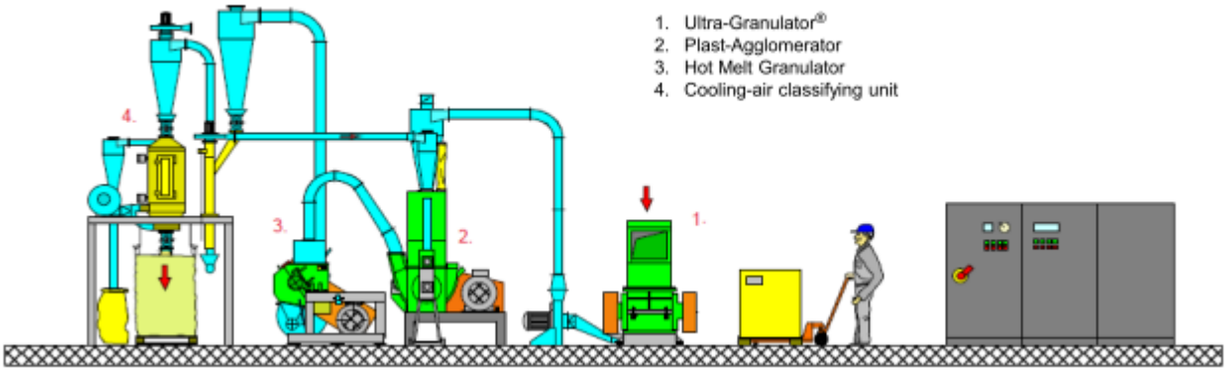

Gentle compounding

For the production of granules and compounds from thermoplastics and rubber with fillers of any kind and in different mixing ratios, PALLMANN has developed the Agglomerator System.

With the Agglomerator System, mixtures from inorganic or organic materials can be processed into free flowing granules of high bulk density.

The feed material can be powder, chips, film, fibers or foam.

The versatility of the technology, the ease of operation and the unlimited possibilities in processing materials is striking.



Materials for agglomeration

HDPE, LDPE, LLDPE	EPS	PA - fiber	PC
PE - foam	XPS	Polyester - film	PLA
PE - fiber	PVC - rigid	Polyester - fiber	Carpet waste
PP - film	PVC - soft	PET - foam	Wood - plastics
PP - fiber	ABS	PET (A/G/GAG)	Synthetic rubber
PS - film	PA - film	PMMA	Compounds

Type		PFV 200	PFV 250	PFV 315	PFV 400
Drive, pre-cutting mill	kW	7.5 - 22	18.5 - 45	30 - 75	75 - 110
Drive, agglomerator	kW	45 - 55	55 -90	75 - 132	90 - 160
Cool water consumption	l/h	700 - 1100	700 - 1100	700 - 1100	700 - 1100
Drive, hot-melt granulator	kW	15 - 22	22 -30	30 - 45	45 - 75
Total installed capacity	kW	88 - 120	120 - 189	165 - 280	243 - 379
Throughput rate, i.e					
Film	kg/h	150 - 250	350 - 500	500 - 700	700 - 1000
Fiber 430 g/l	kg/h	100 - 150	250 - 450	350 - 550	700 - 800
Foam 450 g/l	kg/h	150 - 200	300 - 500	500 - 700	700 - 900

* Throughput rate heavily depends on feed material and desired particle size

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TOP PERFORMANCE IN SIZE REDUCTION

System solutions for:

- Pulverizing
- Granulating
- Agglomerating
- In-House Recycling

Engineering and Service:

- Design and Manufacturing
- Research and development
- Control Systems
- Process monitoring
- Spare and wear parts for size reduction machines in PALLMANN quality
- Installation, commissioning, start - up
- Maintenance and repair service
- Operator training
- Technological training
- Retrofit and modernisation
- Warehouse stocking programs and logistic concepts

ORIGINAL·PALLMANN

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PALLMANN

PALLMANN is the leading manufacturer of size reduction machines and systems for the plastic and in-house recycling industry. PALLMANN Maschinenfabrik designs, manufactures and supplies tailor-made, individual or complete solutions for the processing of almost any plastic as well as in-house recycling products. At its headquarters in Zweibrücken, PALLMANN company operates the world's largest research and development center for size reduction technology as well as a training and service center. More than 100 test machines are available for the preparation of various raw materials including subsequent laboratory analysis on individual scale. In co-operation with the Siempelkamp group, PALLMANN has worldwide production facilities. Our global presence is ensured by a co-ordinated sales network for machinery as well as spare parts and after-sales service.

> Member of Siempelkamp Group

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