

# Preparation of Rubber

**PALLMANN**

From bales



to granules



to powder



## Preparation of rubber

Rubber is used in various industries for the production of many products.

For almost any type of production process it is necessary, that the bales are size reduced into granules or powder.

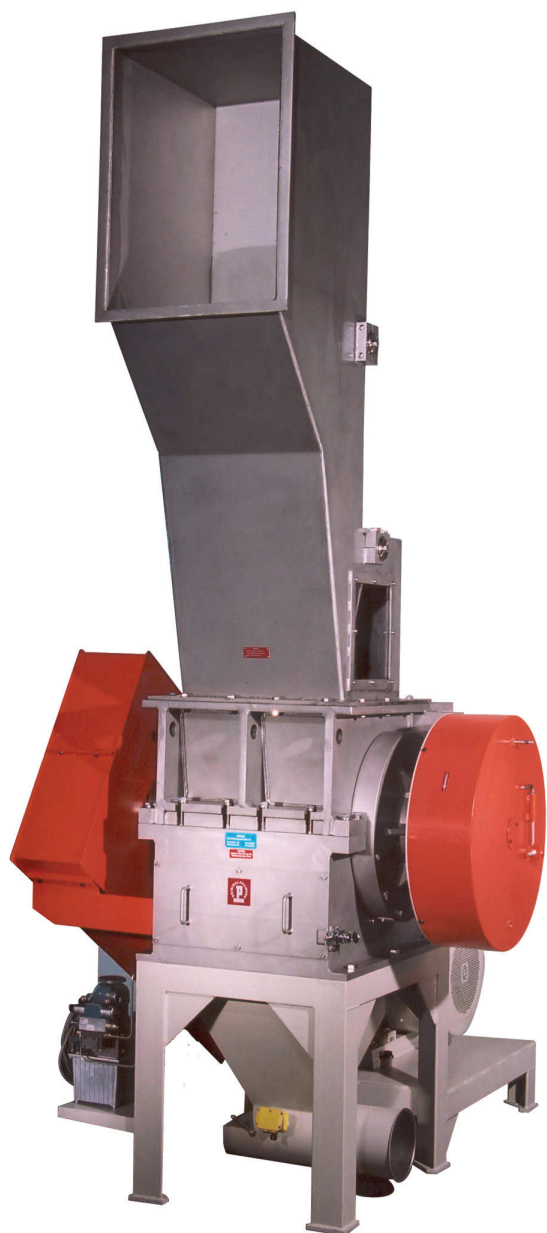
The result is a shorter dissolving and mixing time as well as energy-saving kneading time.

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 with the special unique guillotine rotor. This design allows for low friction and therewith temperature-gentle size reduction.

## Some advantages of PALLMANN systems

- A swinging flap prevents the discharge of already cut material through the inlet chute
- Guided material feeding; bales are fed one at a time into the cutting chamber
- Special guillotine rotor with a high speed flywheel is standard
- 180° screens for maximum throughput capacity
- Easy knife change due to rotor knives adjusted outside the machine in a jig.
- Easy access to the grinding chamber for quick and efficient cleaning
- Extremely safe operation
- Low space requirement due to compact construction

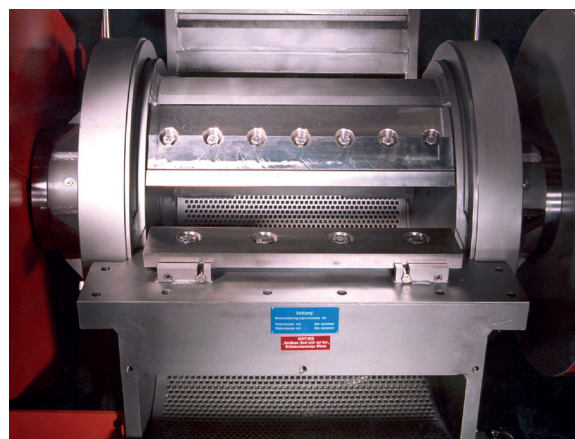
# For best results in rubber granulation turn to PALLMANN



A patented feed chute with shuttle flaps guarantees a guided material feeding and a controlled material intake. The size reduction from a standard size bale to a particle size of smaller than 10mm, can often be accomplished in one granulation step.

However various rubber types require the addition of a dusting agent to prevent sticking. The machine design allows dusting agents required during size reduction, regardless if dry or liquid, to be directly injected into the cutting chamber.

A pneumatic aspiration system is installed downstream of the granulator to dissipate any heat build-up and for the transport of the granulated rubber.



## TYPE PS-C

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

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

# Pulverizing of rubber

Rubber powders are used in a wide variety of applications.

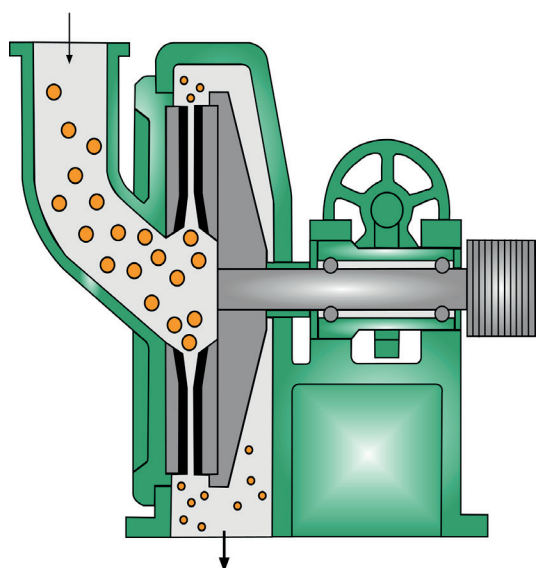
Various applications require various shapes, textures and sizes of the powder.

PALLMANN offers several grinding machines and systems in order to achieve the necessary material qualities and finenesses.

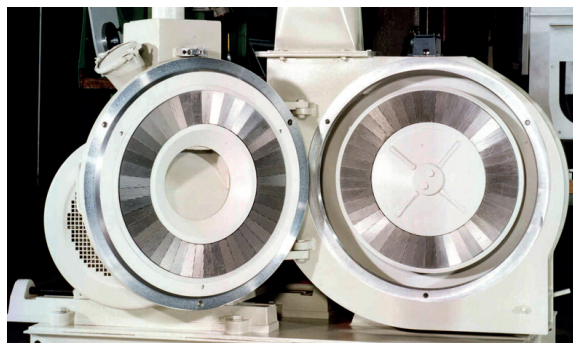
Vertical material discharge prevents clogging of the material in the housing. A bearing with virtually zero play allows the precise setting of the grinding gap via a central gap setting unit.

Easy access to the mill housing and the simple key segment exchange without disassembly of the rotor guarantee a minimum of downtime.

Due to the extensive selection of various key segments, the PolyGrinder allows the processing of many different materials.



The **PALLMANN PolyGrinder** is suitable for continuous operation (24/7).

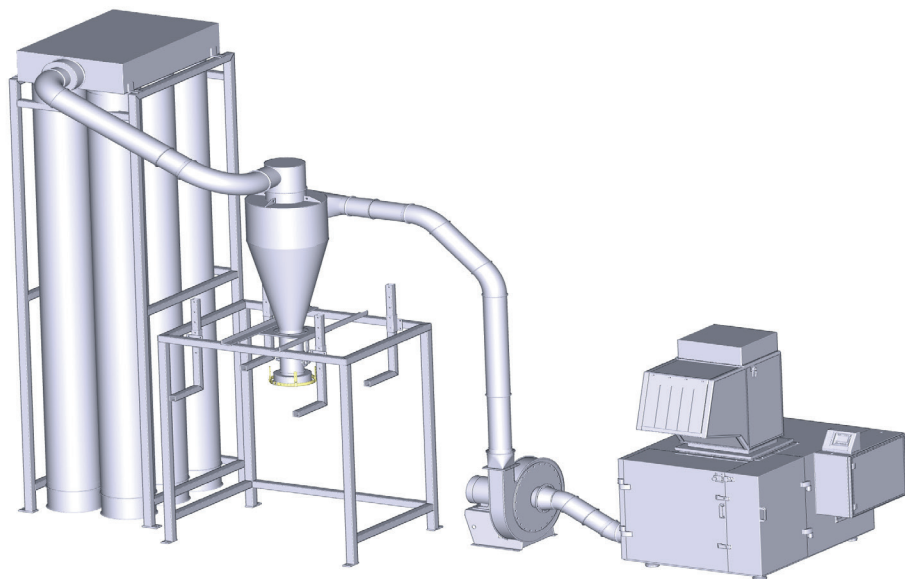
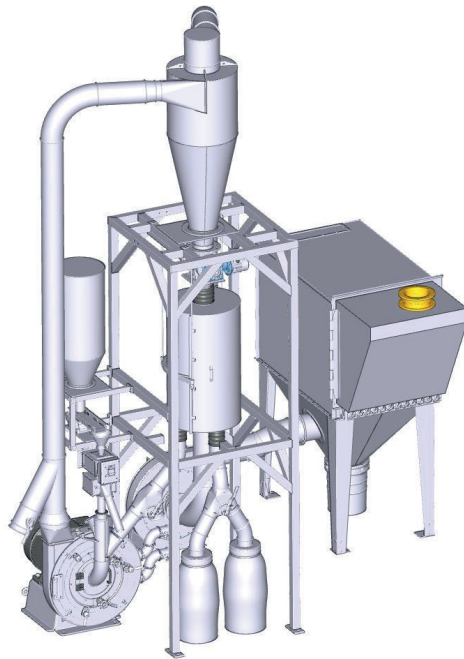


TYPE PKM			300	600	800
Grinding chamber diameter	mm		300	600	800
Motor, main drive	kW		37	75 - 110	90 - 132
Throughput capacity*	kh/h		150 - 200	450 - 650	750 - 1000
Total system capacity	kW		42	92 - 125	107 - 155
Dimensions	Width	mm	2270	3100	4000
	Depth	mm	2600	2800	4100
	Height	mm	5150	5100	7300

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



## Proven grinding systems for rubber





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 cooperation with the Siempelkamp group, PALLMANN has worldwide production facilities. Our global presence is ensured by a coordinated sales network for machinery as well as spare parts and after-sales service.

## 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

## SYSTEM SOLUTIONS FOR

- Pulverizing
- Granulating
- Agglomerating
- In-house recycling



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