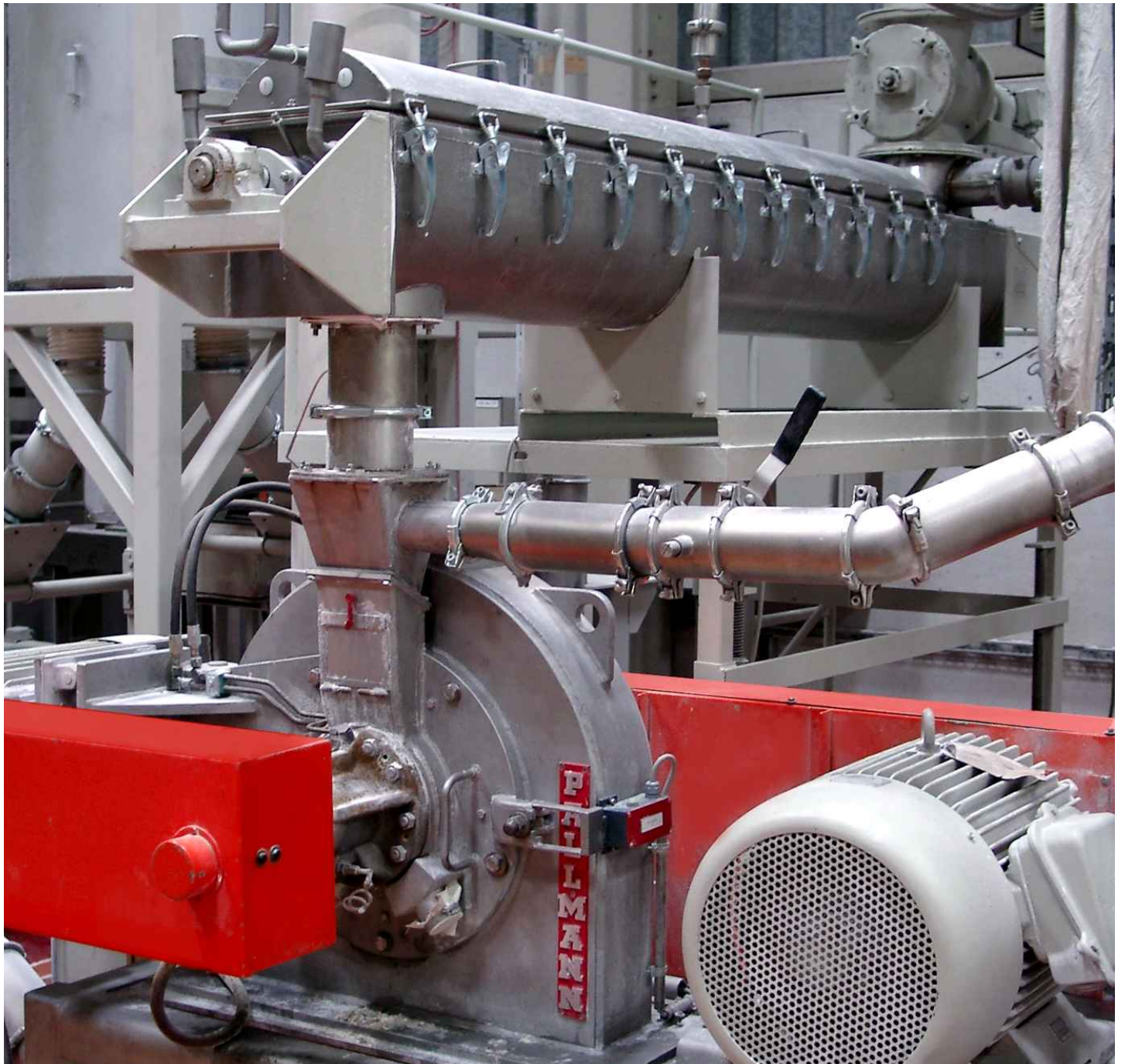


# PALLMANN

---

## Cryogenic Grinding Systems PPST



# Cryogenic Grinding Systems PPST

## Area of Application

Cryogenic grinding systems incorporating the CryoMill™, type PPST produce high quality powders from head sensitive plastics and elastomers. Pulverizing occurs at low temperatures (-70°C to -150°C) and high impact speeds (250m/s). Particle sizes produced are in the range of  $d_{97} = 500 \mu\text{m}$  up to  $d_{97} = 80 \mu\text{m}$ .

The cubical particle size of the powders produced guarantee optimum flowability and a high bulk density.

Additives can be added during the cryogenic grinding process. Typical products are PA6, PA6.6, PET, PP, PC, LDPE, aramide, hot melt adhesives, elastomers, rubber etc.

## Design

The Pallmann CryoMill™, type PPST is designed for roughest continuous operation. All components are manufactured from cold-resistant stainless steel. Good accessibility to all areas was taken into consideration during the design in order to guarantee ease of cleaning.

The electrical control of the system ensures an automatic operation in the selected temperature range.

By means of optimized performance, powders of constant quality can be produced.



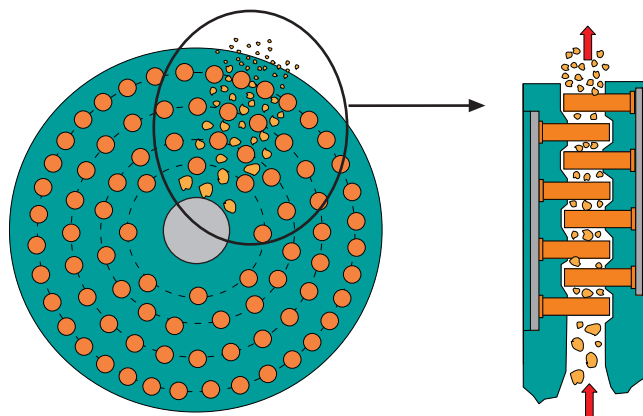
## Method of Operation

Material is metered into a cooling screw and embrittled by means of liquid nitrogen (LN<sub>2</sub>). Size reduction is performed by numerous impacts with pins, which are mounted on fast rotating discs.

Embrittlement temperature as well as the impact speed influences the produced particle size.

Size reduced material is pneumatically conveyed and divided into the desired particle sizes by means of suitable screening technology.

Oversized particles can be directly reintroduced into the cooling screw for regrinding.



## Decisive advantages

- Excellent powder characteristics
- Cubic particles with good flow properties
- High throughput rate
- Low specific energy consumption
- Quick and easy cleaning
- High availability
- Compact design



## Technical data:

Type	CryoMill™	PPST 315	PPST 400
Grinding chamber diameter	mm	315	400
Motor, main drives	kW	15 + 30	30 + 45
Throughput rate*	kg/h	100 - 170	140 - 240

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



## The PALLMANN Group of Companies

The PALLMANN Group of companies is a leading manufacturer for size reduction machines and systems for the process industries. PALLMANN Maschinenfabrik develops and manufactures machines and complete systems according to customer requirements or as standard solutions for the preparation of almost any material as well as recycling products. In its headquarters in Zweibrücken, PALLMANN operates one of the world's largest research and technology centers as well as a training- and service center. More than 130 different test machines are available for the preparation of a wide variety of materials. A downstream laboratory analysis of the test material as well as the preparation on a production scale is possible. In addition to the manufacturing facilities in Europe, North- and South America, the PALLMANN group of companies operates a world-wide spare parts- and service network.



## The PALLMANN Program

Engineering and Service:	Products:
Design and manufacturing	Agglomerators
Research and development	Pulverizing Systems
Production scale testing	Disc Mills
Laboratory analysis	Turbo Mills
Worldwide service	Pin Mills
Spare parts	Laboratory Mills
Controlling	Universal Mills
Process Control	Complete Grinding Systems
Installation & Start-up	Knife Mills
Overhaul & Repair	Profile Shredders
	Rubber Granulators
System solutions for:	Pipe Crushers
Pulverizing	Air-Swept Mills
Granulating	Impact Mills
Agglomerating	Industrial Granulators
Recycling	Cryogenic Grinding Systems

PALLMANN Industries Inc.  
36 Atlantic Way  
Clifton NJ 07012  
USA  
Phone +1 973 471 9773  
Fax +1 973 471 7152  
E-mail: [info@pallmannindustries.com](mailto:info@pallmannindustries.com)  
<http://www.pallmannindustries.com>

PALLMANN do Brasil Ind. e Com. Ltda.  
Av. Presidente Juscelino, 11 56  
09950-370 Diadema S.P.  
Brasil  
Phone +55 11 4075 3044  
Fax +55 11 4075 4968  
E-mail: [pallmann@pallmann.com.br](mailto:pallmann@pallmann.com.br)  
<http://www.pallmann.com.br>

PALLMANN Moskau Office  
Leninskij prospekt dom 158  
Office Nr. 206  
119571 Moskau  
Russland  
Phone 007 495 232 15 21  
Fax 007 495 232 15 22  
E-mail: [info-ru@pallmann.de](mailto:info-ru@pallmann.de)

PALLMANN Maschinenfabrik GmbH & Co.KG  
Wolfslochstraße 51  
66482 Zweibrücken  
Germany  
Phone +49 6332 802 0  
Fax +49 6332 802 521  
E-mail: [plast@pallmann.eu](mailto:plast@pallmann.eu)  
<http://www.pallmann.eu>

PALLMANN Beijing Representative Office  
Room 907; 9th Floor, Tower B  
West Wing of COFCO Plaza  
No.8, Jianguomennei Dajie, Dongcheng District  
100 005 Beijing, China  
Phone +86 10 8511 8668 26  
Fax +86 10 8511 8668 25  
E-mail: [info@pallmann.com.cn](mailto:info@pallmann.com.cn)