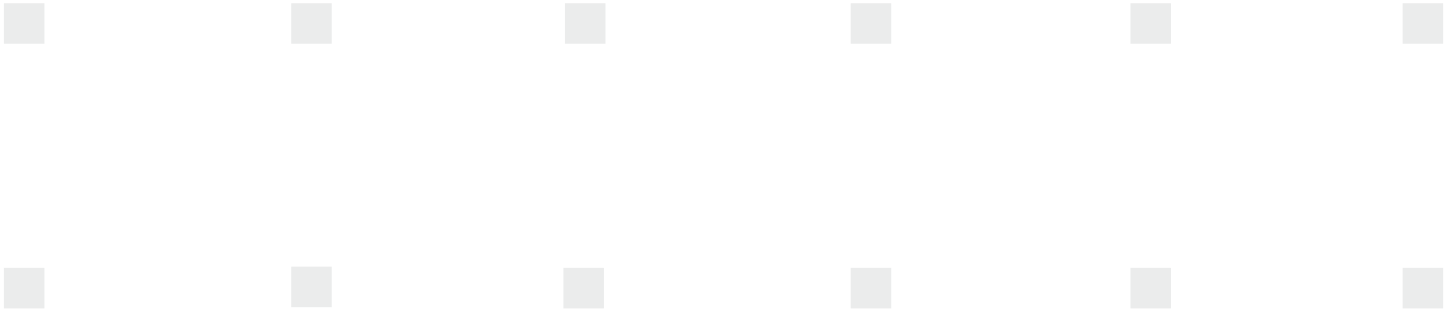


PALLMANN

Turbo Mill PP



Turbo Mill PP

Turbo Mills, type PP are attrition and impact mills for pulverizing, fiberizing, crushing, mixing and blending of soft, brittle, tough, elastic, smearing, hygroscopic, heat sensitive, fatty, creasy and oily materials in dry or wet condition.

Typical materials to be processed are:

Medium hard Minerals

Raw gypsum, bentonite, dry and wet clay, talc, graphite, muscovite, diatomaceous earth, fluorspar, chalk, bauxite, barite, anhydrite, asbestos, bitumen, asphalt.

Coal-like Products

Brown coal, peat mass, coke.

Dyes and Pigments

Organic and inorganic pigments, iron oxide, red lead, ochre.

Pharmaceutical Products

Drugs, leaves, herbs, ergot, chinchona bark, manioc and other roots, cocoa nutshells, additives for medicines.

Salts and Phosphates

Phosphate, fertilizer salts, mirabilite.

Chemical Products

Ammonium nitrate, aluminum sulfate, magnesium oxide, washing and detergent powders, soda, ammonium sulfate, natrium carbonate, dry potassa, herbicides, fungicides.

Oil and Fatty Products

Spices, bone and fish meal, dry meats, soap fat, fresh animal bones, nuts, malt, kernels.

Grain Milling Products

Grain of all kind, noodles, corn, cacao, potatoes, alfalfa, rice.

Fibrous Materials

Wood flour, chips, pulp, straw, bagasse, asbestos, chrome and tanned leather waste, cork granules and flour, textiles, board and paper waste, flocking chemical cellulose, bamboo, hemp, reeds, wet and dry tobacco stems.

Cocoa and Coffee

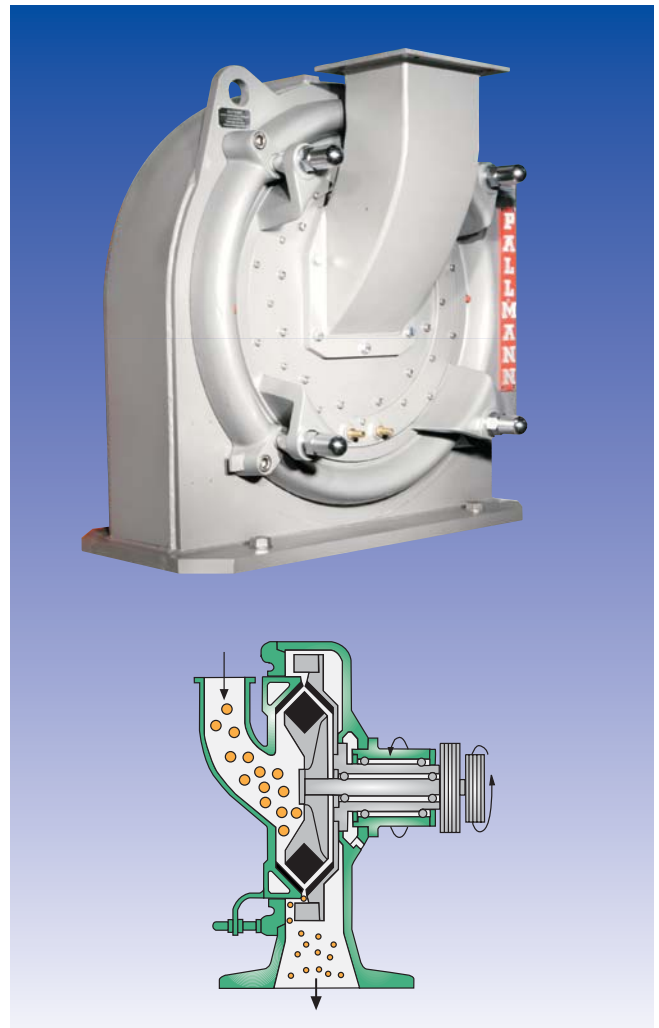
Cocoa beans, cocoa presscakes, coffee.

Plastic and Elastomeric Products

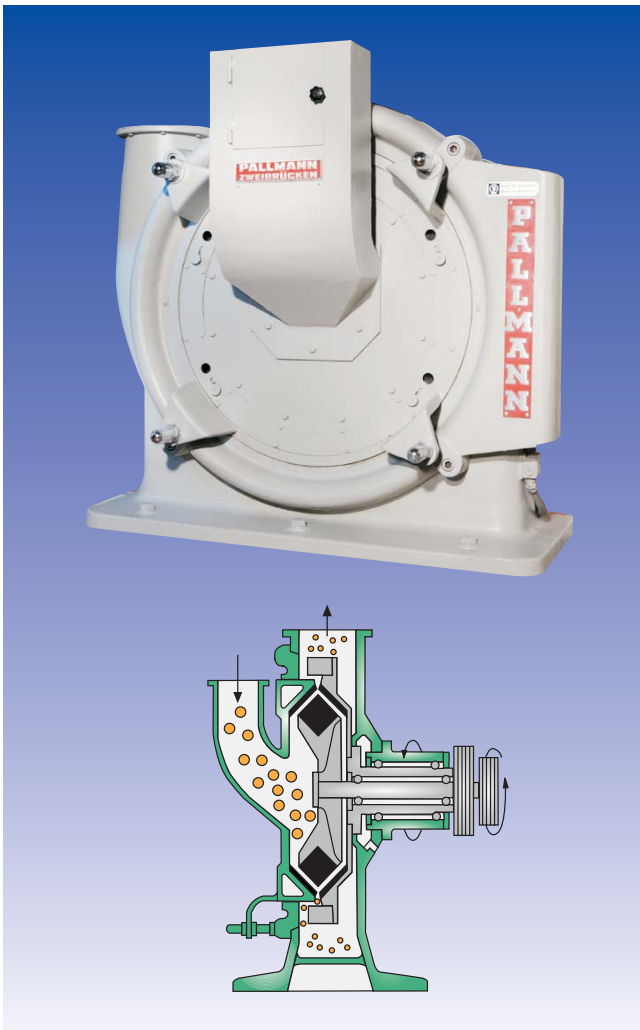
Polyethylene, polyamid, polyurethane, polystyrene, acrylglas, cellulose acetate, phenolics, rigid and flexible PVC, polyester, polypropylene, teflon, plastic foam, rubber waste.

Natural Resins and Pitch

Colophonium, bitumen, asphalt, cumaron, coal tar, hard pitch.



Turbo Mills, type PP are designed in accordance with the highest standards, for tough and reliable operation around the clock. Heavy thick walled machine housings in cast iron or steel fabricated design and a generously dimensioned bearing and drive arrangement guarantee smooth operation and a long service life. The bearing and drive system is flanged to the machine housing and can be easily exchanged as a compact premounted unit. The bearings are specially sealed to prevent dust penetration. The rotor is carefully stress relieved and electro dynamically balanced for smooth vibration-free operation. The grinding chamber is easily accessible through a large front door. As a standard, a baffle plate and a safety door locking allows only access to the grinding chamber at stand still of the rotor.



The Turbo Mill, type PP is supplied in its standard version with finished product discharge straight down. A special housing design with integrated product discharge to the top is available. This option allows installation of the machine without any additional support frame or costly concrete foundation and pit. The Turbo Mill, type PP is powered by two independent motors via V-belt drive – a smaller motor for the rotating baffle plate and a larger motor for the impeller. Turbo Mills, type PP have proven successful by their simple, safe and wear resistant construction.



Unique method of size reduction

The grinding process in a Turbo Mill, type PP differs considerably from common methods. It represents a highly developed combination of attrition and impact grinding. The material to be processed enters from a feed hopper via a feeder into the grinding chamber. The conical interior faces of the baffle plates are equipped with serrated segments made of a highly wear resistant cast. The stationary front baffle plate is fixed in the door and can be adjusted from the outside to set the desired grinding gap. The inner baffle plate rotates clockwise. An impeller rotates counter-clockwise and propels the incoming feedstock at high speed against the segments which results in partial size reduction. Further grinding is supported by extremely agitated air which at the same time provides efficient cooling. The ground material is discharged through the gap between the two baffle plates. The degree of grinding can be controlled by the gap setting and the serration of the segments. The gap setting can be changed during operation. There is very little wear of the segments and the wear plates mounted on the impeller since the grinding action is based on impact and does not depend on cutting with sharp edged serrations of the grinding segments. This is a substantial advantage in comparison to other pulverizers.

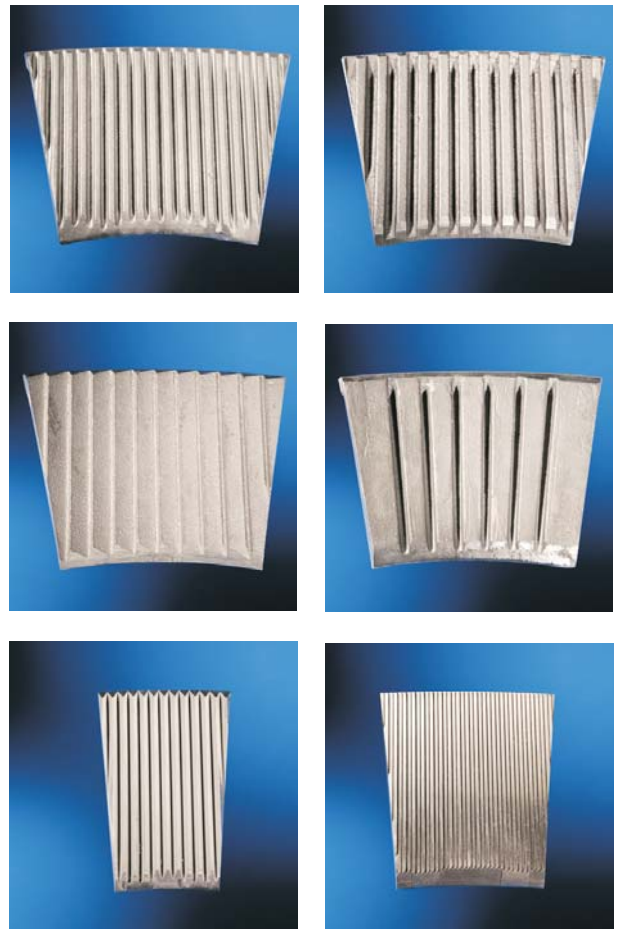
SUPERIOR TECHNICAL SOLUTIONS



Performance in every details

The screenless Turbo Mill, type PP occupies a special position among the well-known grinding systems. Due to its flexibility the Turbo Mill, type PP is in use to process many different materials. The segment profile can be selected for the desired grinding action, according to the product requirements. Hard and brittle materials are pulverized by true impact action; fiber containing materials are fiberized, tough and elastic materials are fine granulated.

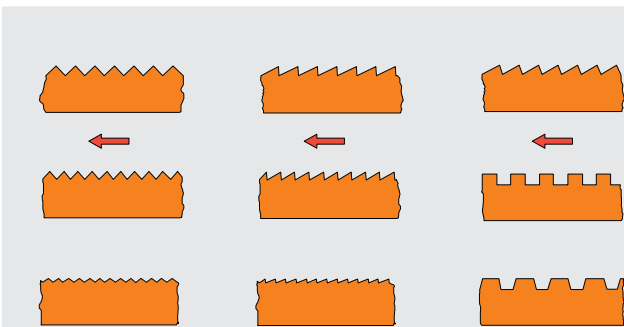
The availability of a large variety of differently patterned and highly wear resistant segments and their simple exchange is of great advantage when requirements call for material and particle size changes. Also the impeller is equipped with changeable and reversible wear plates or grinding cones.



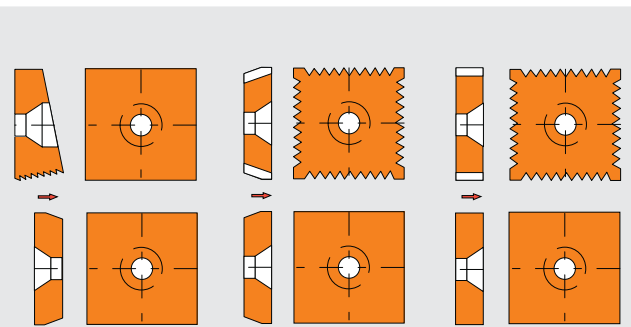
Due to the unique design Turbo Mills, type PP are used for:

- Pulverizing
- Granulating
- Fiberizing
- Grinding and Drying
- Mixing and Blending

Baffle plate segments



Impeller wear plates





Easy cleaning

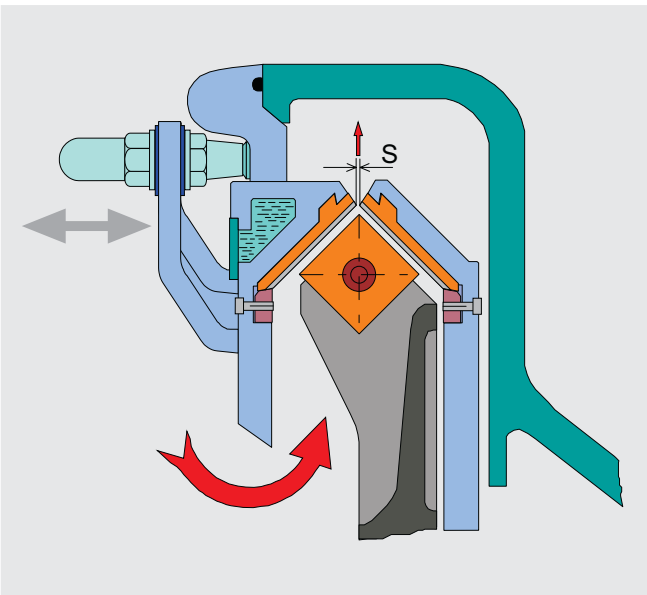
The front door of the machine is easy to open and allows free access to all inner parts of the grinding chamber for easy cleaning and servicing.

Material infeed

A uniform continuous feed rate is necessary to achieve maximum performance. Different flow characteristics call for different types of adjustable feeders. Vibratory, screw, disc and belt feeders are commonly used. In any case magnets should be installed to collect tramp iron. PALLMANN supplies on request the complete feeding system including chutes manufactured to meet customer's requirements and local conditions.

Special designs

For grinding heat sensitive materials the Turbo Mill, type PP can be provided with a water cooling jacket behind the stationary baffle plate. The Turbo Mill, type PP is available in mild steel or stainless steel design. Armor plated designs are used to handle abrasive feed stock.



Decisive advantages:

- Suitable for a large variety of applications
- No internal screen installed
- Dry and wet grinding possible
- Cool grinding operation
- Easy adjustment of required fineness
- Easy exchange of wear parts
- Rugged and reliable design
- Very low maintenance cost

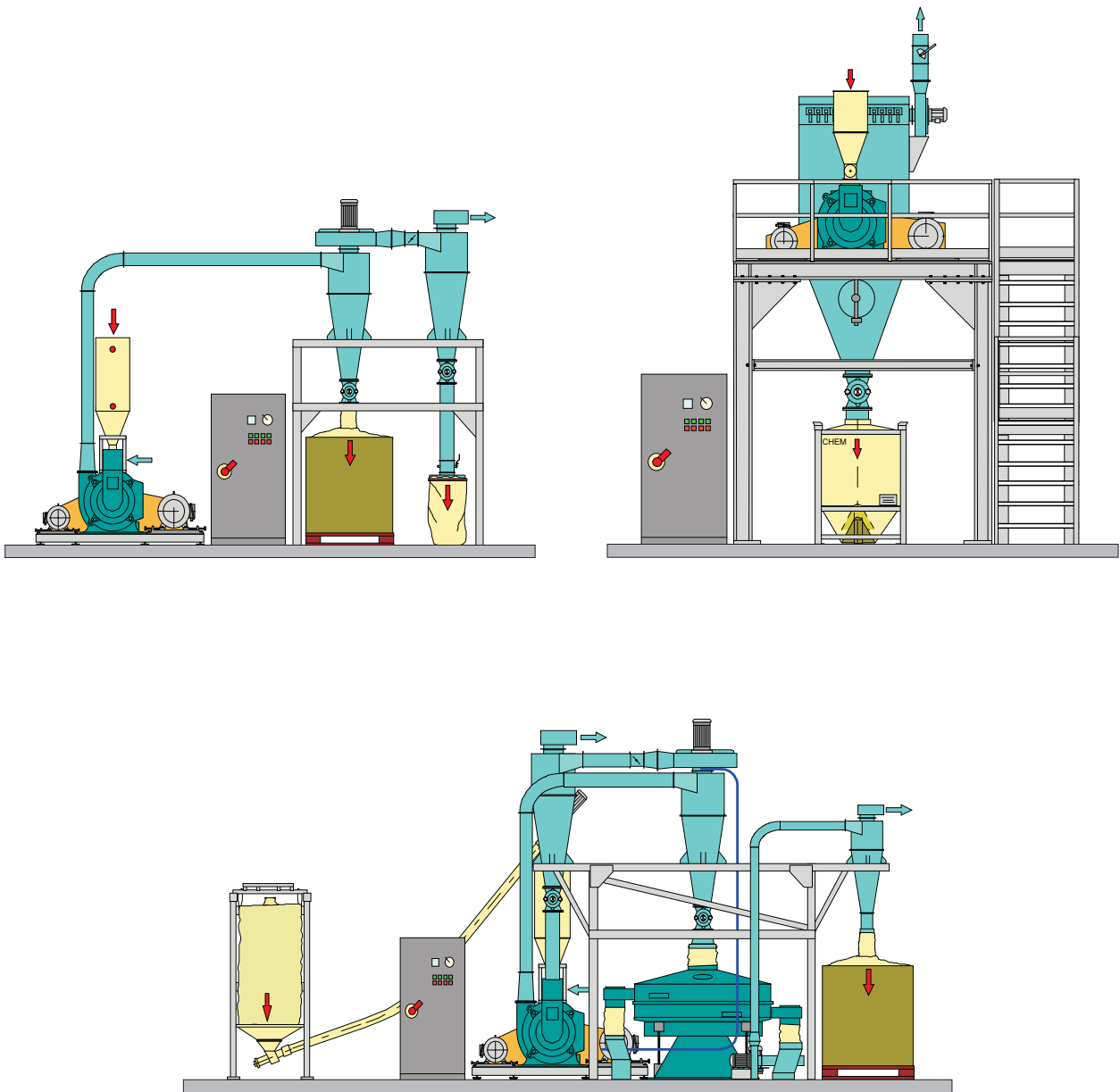
PERFORMING SYSTEMS

Proper installation guarantees optimum machine efficiency

Turbo Mills, type PP should always be fed by vibratory or screw feeders in order to make sure, that a uniform feed rate and optimum use of the installed electric power can be achieved. Between the feeder and the feed chute of the mill it is recommended to install either a plate or drum magnet or even better a metal separator.

The air flow generated by the Turbo Mill should be taken care of, by installing an aspiration system with dust collector.

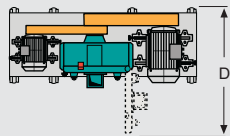
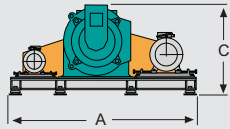
The Turbo Mill can be installed on a flat concrete floor if lateral product discharge has been chosen, or on a steel frame or on concrete foundations with a discharge pit if you decide for standard design with product discharge straight down.



Technical data:

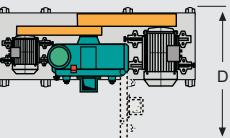
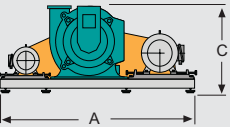
Type	PP	4S	6S	8S	12S
Scale-up factor	F=ca.	0.6	1.0	1.7	2.9
Diameter of grinding chamber	mm	400	600	800	1200
Net weight machine without motor	approx. kg	420	960	1630	3600
Shipping space machine only	approx. m ³	0.7	1.5	2.8	5.4
Recommended motor	kW	7,5 + 15	11+30	18.5+45	22+75
Air displacement of machine	approx m ³ /min	13	26	31	43

Standard version with bottom discharge



A	mm	1990	2600	3500	3500
B	mm	770	950	1360	1680
C	mm	900	1065	1515	1960
D	mm	1370	1760	2460	3325

Design with lateral product discharge to the top



A	mm	1990	2600	3500	3500
B	mm	770	950	1360	1680
C	mm	900	1065	1515	1960
D	mm	1370	1760	2460	3325





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:

Design and manufacturing
Research and development
Production scale testing
Laboratory analysis
Worldwide service
Spare parts
Controlling
Process Control
Installation & Start-up
Overhaul & Repair

System solutions for:

Pulverizing
Granulating
Agglomerating
Recycling

Products:

Agglomerators
Pulverizing Systems
Disc Mills
Turbo Mills
Pin Mills
Laboratory Mills
Universal Mills
Complete Grinding Systems
Knife Mills
Profile Shredders
Rubber Granulators
Pipe Crushers
Air-Swept Mills
Impact Mills
Industrial Granulators
Cryogenic Grinding Systems

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