
Production of wood flakes for the panelboard industry



Knife Ring Flaker PZKR



SIEMPELKAMP
SIZE REDUCTION

THE SYNONYM for constant high flake quality, reliability, precision and durability.

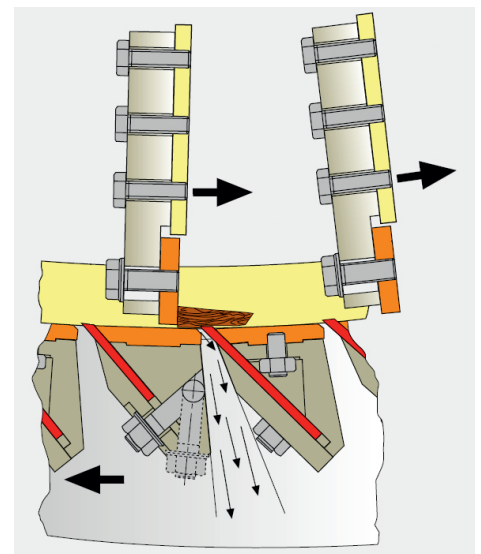


Area of Application

The quality and consistency of flakes have a significant influence on board properties. Knife ring flakers are flexible and can be individually adjusted to meet flaking requirements. The professional preparation of chips leads to the right flakes for particleboard. Due to constant further development of machines and material, we are again and again resetting the standards in flaking technology.

Method of Operation

By means of a feeding system, consisting of a vibratory feeder and a magnetic drum, the wood chips are fed into the flaking chamber through the gravity separator „Cleanomat“ and a distribution disc. The rotating turbo impeller accelerates the chips and pushes them against the interior of the knife ring where they are flaked by the knives installed therein. The desired flake thickness is for the most part determined by the knife protrusion. The flakes are guided through a defined gap between knife and wear shoe and are discharged straight down out of the machine.



The well-proven counter-rotating principle

The knife ring is chain-driven by a gear motor counter-rotating to the impeller. This proven counter-rotating operating principle of PALLMANN flakers assures uniform use of all knives and reliable discharge of the flakes. The result is a high cutting performance and constant flake quality. Furthermore, the counter-rotating principle of the knife ring ensures proper flake discharge even at extremely high moisture contents, i.e. no clogging of the flake channels and no material accumulation on the outside of the knife ring.

Setting of knives and the beater plates

The knife packages, consisting of knife holding plates and knives are set outside the machine in a setting device to the precisely desired knife protrusion. When using the setting- and sharpening robot type PZSE, the setting of the knives is performed fully automatically. The simple precise setting of the impeller beater plates in the machine by means of a fixture permanently ensures an accurate setting gap, resulting in the highest flake quality.

Fighting wear

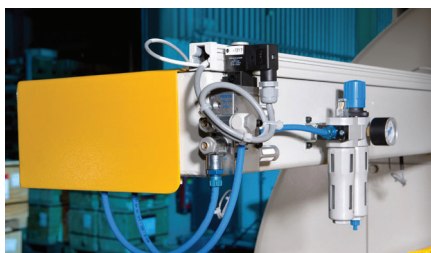
Easily exchangeable and regrindable wear parts protect the interior of the knife ring and the impeller. Good flake quality can be achieved over a long lifetime.



Supplementary accessories for long life operation and precise machine settings.

Gravity sifter CLEANOMAT

- Removal of heavy particles based on specific material densities
- Adjustable material- and air guiding flaps for optimum adjustment to various feed materials and operating conditions
- Cross-stream fan for the production of an even air flow across the entire material feeding width
- Increased operational lifetime of all wear parts

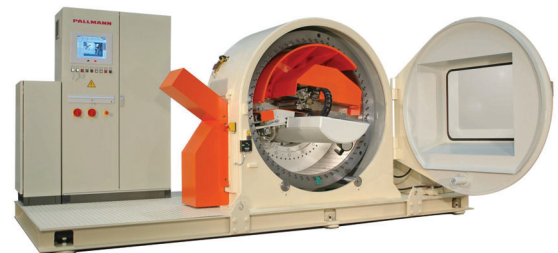


Cleaning of the ring

- Automatic cleaning of the rotating knife ring during machine stoptime
- Optimum pre-cleaning for knife changing
- Cleaning with oscillating lance using air or water nozzles

Setting- and Sharpening Robot PZSE

- Fully automatic setting and sharpening of the knives in the ring
- Grinding of the wear shoes for even knife protrusion
- Control of wear tolerance and limit of wear shoes and knives
- Wet grinding process to maintain knife properties
- Cleaning of grinding emulsion via automatic filter
- Achievement of optimum knife cutting circle and knife protrusion



Decisive Advantages

- › Constant flake quality
- › Highest precision in knife setting
- › Even utilization of all wear parts
- › No clogging at high moisture content
- › Optimum wear protection
- › Simple and safe operation
- › Robust, reliable and long-lasting design

PZKR		14-450	15-500	16-600
Knife ring diameter	mm	1400	1500	1600
Knife length	mm	450	500	600
Number of knives	pieces	66	66	74
Capacity *	t b. d. / h	7,5 - 13,0	8,5 - 14,5	11,5 - 19,5

* Depending on the wood species, conditions and machine settings



System solutions for:

- Flake production
- Fiber production
- Recycling of waste wood
- Annual plants preparation
- Thermal usage

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



Any questions?
We've got answers

Pallmann is the leading manufacturer of size reduction machinery for the wood products industry. Pallmann designs, manufactures and supplies tailor-made, individual or complete solutions for the processing of raw material for MDF, OSB and particleboard plants. 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. Numerous machines are available for the preparation of various raw materials including subsequent laboratory analysis on individual scale. Our global presence is ensured by our sales network for machinery as well as spare parts and after-sales service.

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Intelligent engineering
for future generations.