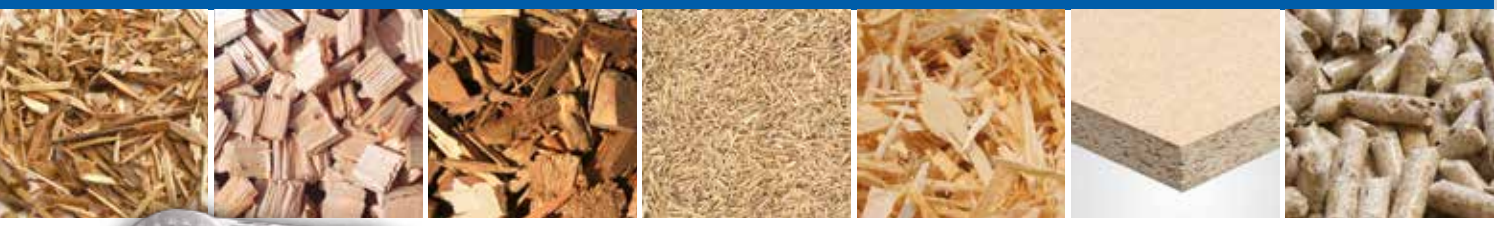
DIEFFENBACHER

Knife Ring Flaker MRZ / MRZ High Speed (HS)

Energy-efficient flaking

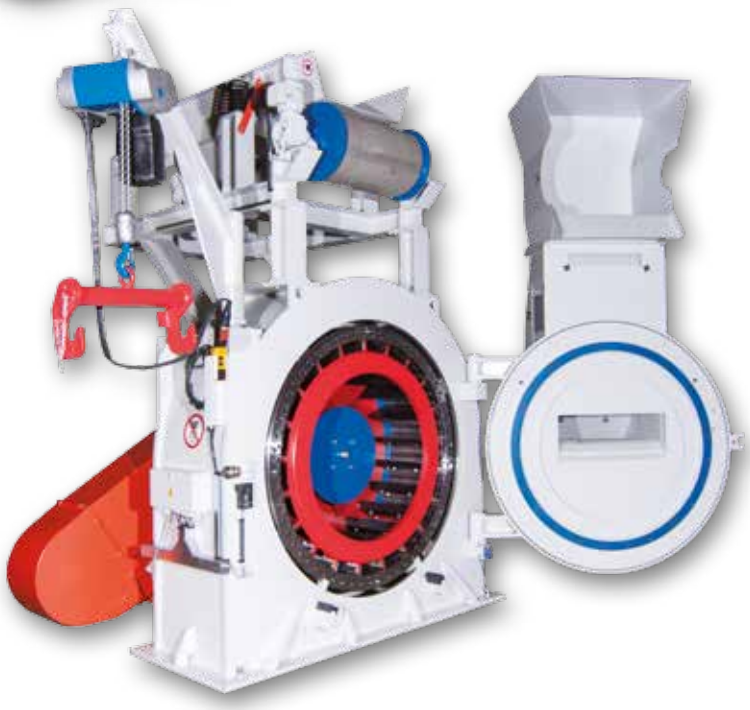


The MAIER Knife Ring Flaker is a high-performance machine for the production of high-quality flakes from chips for the particleboard and pelletizing industry.

The feeding of the wooden chip flow is effected through the integrated cleaning system consisting of vibration conveyor, magnetic drum and heavy particle separator. In the flaking chamber the precleaned chips are guided to the knives of the static knife ring by the rotating rotor and cut into flat uniform flakes.

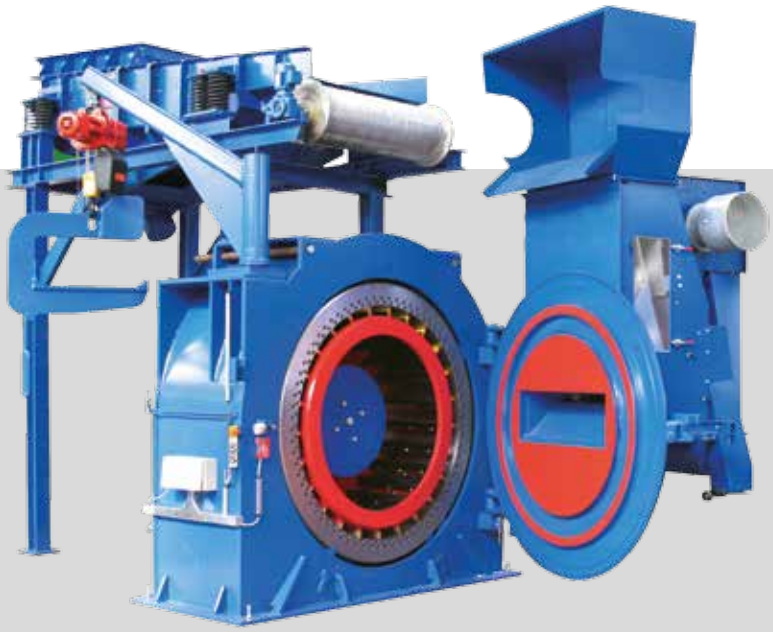
The static and exact centered knife ring in combination with a precise rotor bearing system form a narrow gap between the rotor and the knife ring. This allows an extraordinary high-precision cutting process even with high rotor speed. Result is a significantly increased flake quality and a reduced specific energy consumption of the machine.

The final flakes can be discharged mechanically or pneumatically.



Your benefits

- Processing of micro- and macro-chips from green- and precleaned recycling wood
- Flaking of light-weight and soft wood
- Production of flat flakes with constant high quality
- Adjustable flake thickness
- Energy efficient flaking with 12–20 kWh/t bd.
- Capacity up to 20 t bd./h
- Long lifetime of the knives
- Low wear costs
- Improved board quality
- Tried and trusted worldwide
- Advanced and reliable technology
- High machine availability
- Low maintenance and service-friendly
- Wide field of application

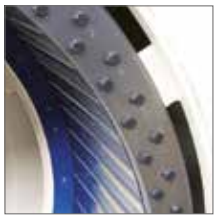


Knife Ring Flaker MRZ/ MRZ High Speed (HS)

Features

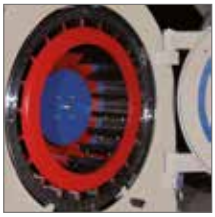
Knife ring

- Static and exact centered knife ring with optimized number of knives
- Flow-optimized free flake discharge channel reduces fine material content, as well as energy consumption and increases the flake and board quality
- Knife clamping plate with supporting studs ensures safe clamping of the knives and free flake discharge
- Flake thickness selectable by freely adjustable knife protrusion
- Exact positioning of knives by centering pins for a constant adjustment of knife protrusion
- Variable form of wear plates (curved or straight) for improved flake quality and reduced energy consumption
- Special knife ring for soft-wood available



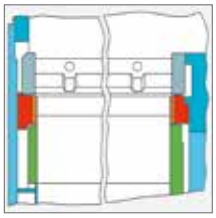
Rotor

- Wear protection through trapezoidal hood above rotor hub
- Wear plate for the rotor shovel with edge protection and overlapping to rotor knife
- Individually adaptable chip distribution disc
- Adjustable rotor knives with V-ledge protection (optional)



Machine casing

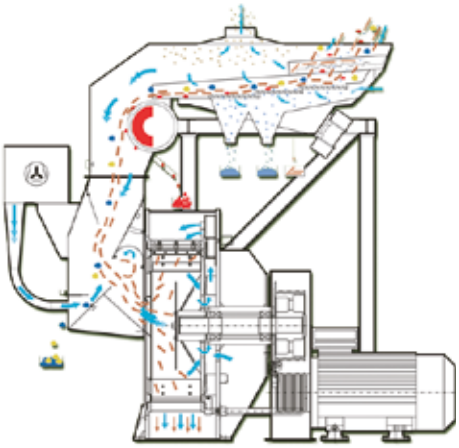
- Annular space sealing with quickly replaceable wear segments to optimize the flake distribution curve
- Exchangeable stainless steel lining to protect the casing
- Optimized air guiding system for better flake discharge
- Hydraulic 3-point knife ring removal device with tilt protection for fast exchange of the ring
- Easy knife ring exchange due to the integrated crane with swing arm and transport trolley



Knife Ring Flaker MRZ/ MRZ High Speed (HS)

Features

Integrated chip-cleaning system

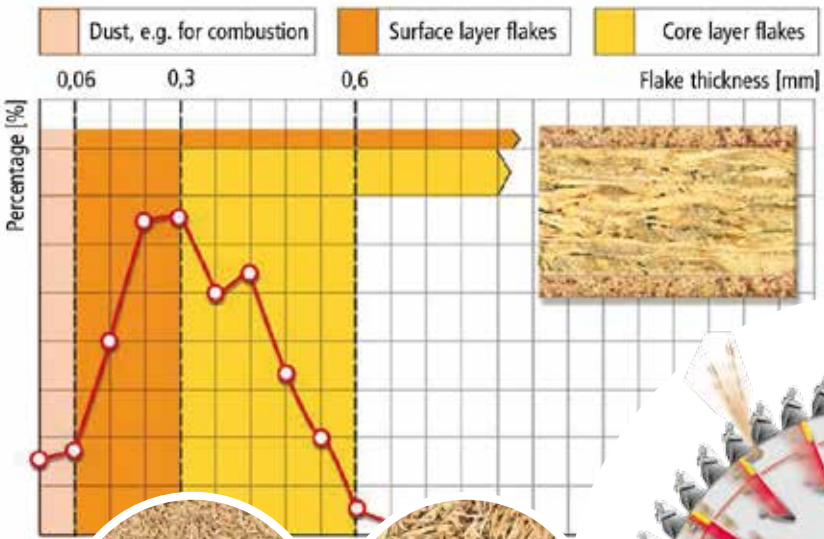


The integrated MAIER cleaning system makes separate flake cleaning equipment in many cases redundant. It can be individually configured depending on application.

- Vibration conveyor for homogeneous feeding of material flow
- Optional screens with variable perforation for screening out fines or oversizes
- Exhaustion of foils and dust
- Magnet drum with adjustable discharge point
- Heavy particle separator precisely adjustable
- Air guidance through the rotor back-wall for the cleaning degree optimization
- Adjustable cleaning degree
- Low energy consumption and maintenance costs

MRZ HS – High-Speed Flaker

The combination of the static knife ring and a precise rotor bearing system enables very high rotor rotation speed and herewith cutting speed of > 100 m/s. Due to the high centrifugal forces and narrow gap between rotor and knife ring even very small chips as well as light-weight materials can be guided precisely towards the knife and finally be cut into homogenous thin flakes.



Your benefits

- Flat cut flakes even from micro-chips and light-weight wood
- Production of fine cut flakes for surface layer on wet side as well as on dry side
- Low energy consumption (approx. 20 kWh/t bd.)
- Improved board quality due to the uniform and denser surface layer
- Production of extra thin flakes (0,3 – 0,5 mm) for e.g. homogeneous boards

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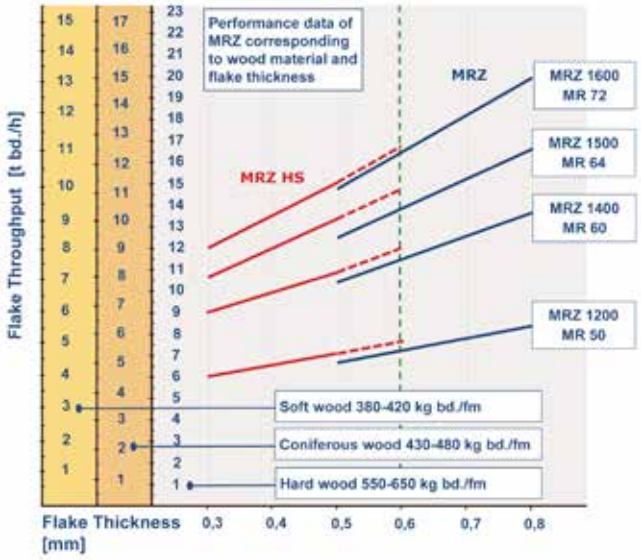
Technical Data

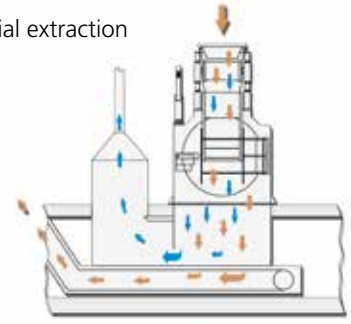
Automatic knife ring grinding system MSA

The automatic knife ring grinding system MSA ensures the automated PLC-controlled, precise and cost-efficient regrinding and adjustment of the knives for the knife ring flaker.

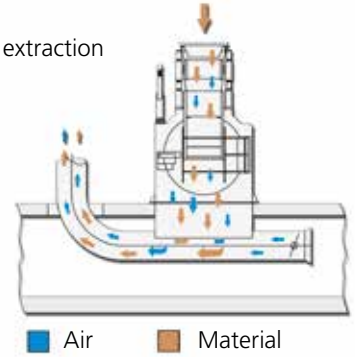


Partial and full extraction of MRZ

Partial extraction



Full extraction



Knife ring flaker MRZ

Type of machine	Knife ring	Length of knife [mm]	Number of knives [pcs.]	Number of rotor blades [pcs.]	Main drive [kW]	Capacity[1] [t bd./h]	Self-propelled air volume [m³/h]	Dimensions[2] (L x W x H) [m]	Weight[2] approx. [t]
MRZ 1200	MR 50	464	50	18	160 / 200	4,5 - 8,5	6.000 - 8.000	2,2 x 1,5 x 1,9	6
MRZ 1400	MR 60	464	60	21	250 / 315	6 - 12	9.000 - 12.000	2,4 x 1,5 x 2,1	8
MRZ 1500	MR 64	548	64	23	315 / 355	7 - 15	11.000 - 14.000	2,5 x 1,7 x 2,4	9
MRZ 1600	MR 72	648	72	25	355 / 400	8 - 20	12.000 - 15.000	2,9 x 1,8 x 2,5	10

Knife ring flaker MRZ High Speed (HS)

Type of machine	Knife ring	Length of knife [mm]	Number of knives [pcs.]	Number of rotor blades [pcs.]	Main drive [kW]	Capacity[1] [t bd./h]	Self-propelled air volume [m³/h]	Dimensions[2] (L x W x H) [m]	Weight[2] approx. [t]
MRZ 1200 HS	MR 50	464	50	18	160 / 200	4 - 7	7.000 - 9.000	2,2 x 1,5 x 1,9	6
MRZ 1400 HS	MR 60	464	60	21	250 / 315	6 - 10	12.000 - 14.000	2,4 x 1,5 x 2,1	8
MRZ 1500 HS	MR 64	548	64	23	315 / 355	7 - 12	13.000 - 15.000	2,5 x 1,7 x 2,4	9
MRZ 1600 HS	MR 72	648	72	25	355 / 400	8 - 14	14.000 - 16.000	2,9 x 1,8 x 2,5	10

1) MRZ: Refering to flake thickness of approx. 0,5 - 0,8 mm, depending on input material;
MRZ HS: Refering to flake thickness of approx. 0,3 - 0,5 mm, depending on input material
2) Dimensions and weight of basic machine with V-belt pulley on machine side without add-on units

Please contact us for further information:

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