

# PALLMANN

Chip Washing System PWH



## Chip Washing System PWH

### High performance

#### Only the best available solution on the market is good enough to serve our customers

For more than a century, Pallmann has been developing and building machines for the size reduction industry. Pallmann's market leading position is a result of our philosophy to provide our customers efficient and at the same time precise, robust and long lasting machines and complete systems.

#### Application

The Chip Washing System PWH is designed to wash wood chips, remove grit and contamination of heavy particles by hydraulic separation. This protects the downstream components, reduces the wear e. g. of the pressurized refining system and minimizes the mineral content of the MDF/HDF board. Pallmann Chip Washing Systems reflect the optimum combination of experience gathered in many years of practical operation and highly developed engineering skills. Each component of the system is designed for utmost reliability and economy in the board production process. Constant improvements with and for our customers have also resulted in an efficient maintenance-friendly system providing maximum availability.

#### Process Description

The Chip Washing System type PWH is installed in front of a pressurized refining system. Fine and oversized material needs to be screened out of the wood chips before entering the washing process.

Wood chips enter the Chip Washer from the top. The rotor of the Chip Washer creates turbulences thus enhancing the cleaning result and the separation of the contamination from the wood chips.

In the Chip Washer (Pos. 1), wood chips are submerged in water and material heavier in density sinks down into the Gravity Separator. Contamination like stones and metal are discharged through a sluice. Upstreaming wood chips flow into the Chip Tank (Pos. 2).



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The Chip Pump (Pos. 3) picks up wood chips and water and conveys them to a Dewatering Screw (Pos. 4). Due to high turbulences in the Chip Pump (Pos. 3) and by hydraulic transport, grit and other smaller contamination are cleaned efficiently off the wood chips.

The Dewatering Screw (Pos. 4) separates the wood chips from the water loaded with grit. From there, the wood chips are carried into the Chip Bin (Pos. B) of the Pressurized Refining System.

The back flowing water containing fine solids passes the Hydrocyclone (Pos. 5). By centrifugal action solids are separated, discharged through the Discharge Valve and led towards the Rotary Screen (Pos. 9). Process water from the Hydrocyclone (Pos. 5) is recirculated into the Pump Tank (Pos. 6) and from

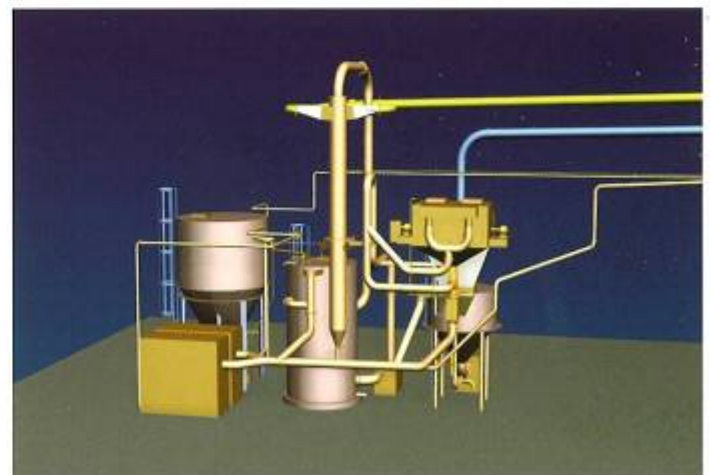
there, via the Feed Pump (Pos. 7), back to the Chip Washer and the Gravity Separator.

In addition, the wash plant accepts and cleans excess water from the plug screw of the pressurized refiner system.

The solids primarily extracted in the washing system all pass through the enclosed rotary screen. Its working principle guarantees a clean and efficient removal of most solids.

Mechanical cleaning is followed by gravity separation in combination with dewatering of sludge, thus offering optimal use of process water and consistent cleaning efficiency.

To assure best cleaning conditions and protection against freezing, the system can be steam heated.





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### Customer benefits

- High efficient cleaning of contamination and grit assuring best protection of subsequent components.
- Use of heavy duty pumps and components offer maximum availability.
- Several steps of water cleaning allow extended use of the process water.
- Efficient cleaning of the chips by specific design and control equipment.
- Process control and reliable operation by HMI/PLC system combined with comprehensive instrumentation.
- Clean and safe operation by selection of components.
- Most flexible arrangement in combination with hydraulic transport.
- Maximises usable life of refiner segments and wear parts.
- Reduced mineral content in final product and enhanced machinability.
- Maintenance friendly design of all components allowing swift access to wear and spare parts.



### Technical Data

Type	Approx. chip throughput o.d. t/h	Chip washer type	Dewatering screw type
PWH 80	12.0	PCW 15/7	PDS 70/1
PWH 120	20.0	PCW 15/7	PDS 100/1
PWH 240	40.0	PCW 24/15	PDS 100/2



## The Pallmann Group

The Pallmann Group is the leading manufacturer for size reduction machinery in the wood products industry. The Pallmann Maschinenfabrik designs, manufactures and supplies tailor-made individual or complete solutions for the processing of raw material for MDF, OSB, particle board, waste wood and annual plants. At the headquarters in Zweibrücken, the Pallmann company runs the world's largest research and development plant as well as a training and service centre. More than 100 test machines are available for the preparation of various raw materials with subsequent laboratory analysis on industrial scale. In addition to the manufacturing plants in North and South America, the Pallmann group has a worldwide sales and service network.



## The Pallmann Program

### Engineering and Service:

Design and manufacturing  
Research & development  
Tests at industrial scale  
Laboratory analysis  
Worldwide service  
Spare parts  
Control systems  
Process monitoring  
Set-up & commissioning  
Refurbishment

### System solutions for:

Flake production  
Fibre production  
Strand production  
Recycling  
Annual plants preparation

### Components:

Debarker  
Knife shaft flaker  
Long log flaker  
Disc chipper  
Drum chipper  
Knife mill  
Knife ring flaker  
Double stream mill  
Hammer mill  
Wing beater mill  
Screen ring mill  
Turbo mill  
Fiberizer  
Drum shredder  
Bale breaker  
Depithier  
Refiner  
Chip washing

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