





Technical data

EcoPulser Single

Throughput capacity approx. 5 t/h

Height 1.350 mm incl. infeed chute

EcoPulser Twin

approx. 10 t/h production of SL in PB industry

Siempelkamp Maschinen- und Anlagenbau GmbH Siempelkampstraße 75 | 47803 Krefeld | Germany Phone: +49 2151 / 92-30 | www.siempelkamp.com Pallmann Maschinenfabrik GmbH & Co. KG Wolfslochstr. 51 | 66482 Zweibrücken | Germany Phone: +49 6332 / 802-0 | www.pallmann.eu

Leadership in Technology







EcoPulser Size reduction per shock waves

EcoPulser – Size reduction per shock waves

Any kind of mechanical size reduction – i.e. grinding, tearing, cutting absorbs energy by friction. The tool-free size reduction method of the EcoPulser, based on shock waves, is an innovative non-contact concept and realizes outstanding energy efficiency: The process for the size reduction of wood chips and for the production of chips and surface layer material is non-cutting and nearly wear-free. Shock waves, generated by interferences of impacting pressure fronts, act on the material and thereby break the structure.

Even heavily abrasive materials can be perfectly size reduced with this non-contact process as they are broken up in the air. No cutting or impact edges are used for this type of size reduction. Therefore any resharpening or replacement of knives, hammers or other grinding elements is no longer necessary. The EcoPulser is even resistant to contaminants such as rocks or metal pieces, as there is no material contact with the vane rings. The result: High efficiency, low maintenance and high machine availability.



Energy saving potential

Key advantages

- High power efficiency Up to 80% energy saving compared to standard size reduction concepts
- Extremely low machine wear due to contact-less size reduction
- Low maintenance cost due to long lifetime of tools
- Reduce risk of explosion generated by the EcoPulser due to high flow rate inside the machine
- High resistance against impurities like stones, glas, plastic and smaller metallic parts

Shock wave principle



Working principle

- The size reduction inside the EcoPulser is based on an innovative principle
- The flakes / chips structure is disintegrated (exploded) by air pressure pulses
- Two high-speed rotors run in opposite directions
- Wings in the rotors produce defined pressure pulses
- Disintegration of flakes takes place where two pressure pulses meet and generate under-pressure causing the cells to explode

