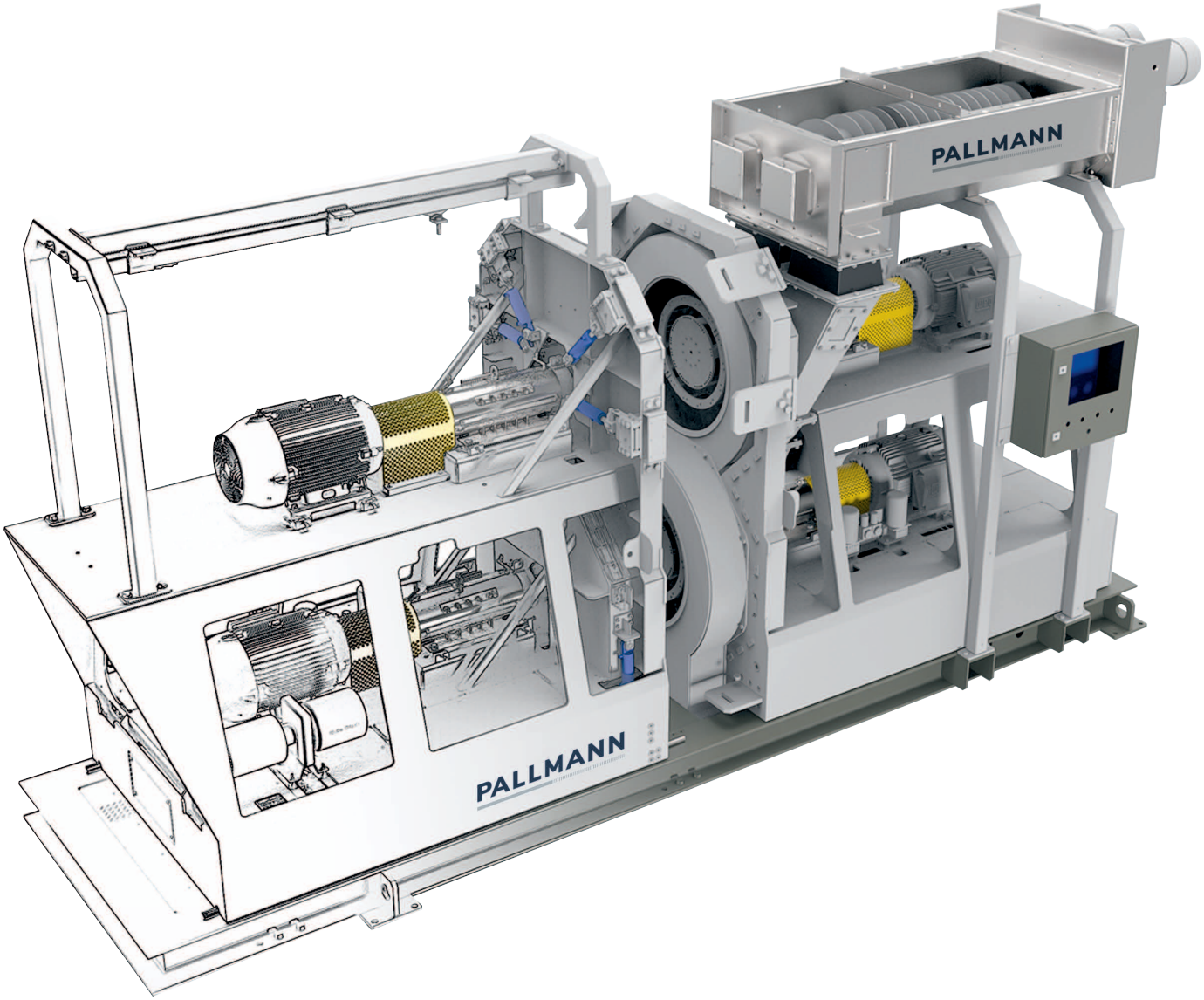
PALLMANN

Siempelkamp



EcoPulser

Size reduction per shock waves

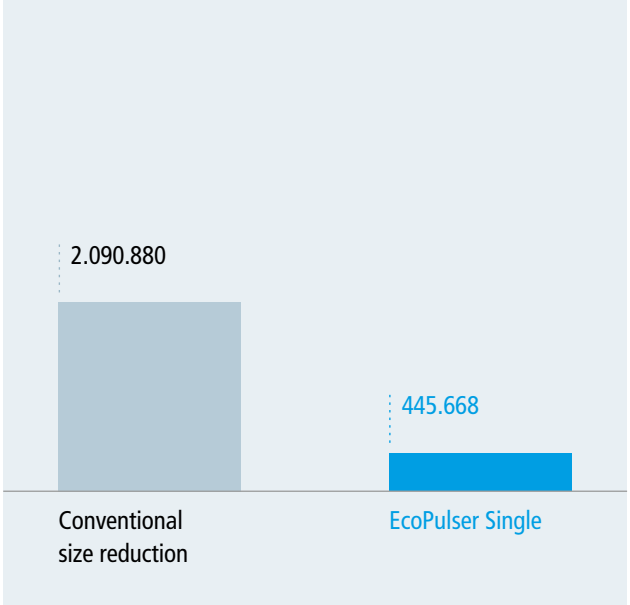
EcoPulser – Size reduction per shock waves

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.

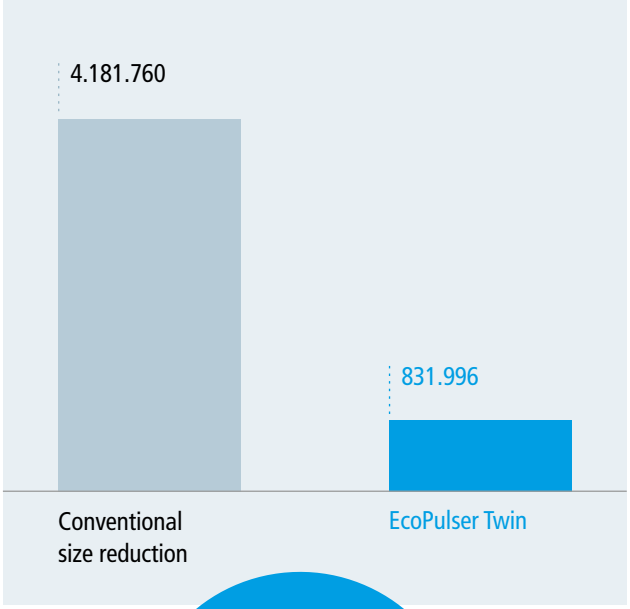
Even heavily abrasive materials can be perfectly size reduced with this non-contact process as they are broken up in the air. No cutting or impact edges are used for this type of size reduction. Therefore any resharpening or replacement of knives, hammers or other grinding elements is no longer necessary. 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

Capacity: 5 t/h



Capacity: 10 t/h



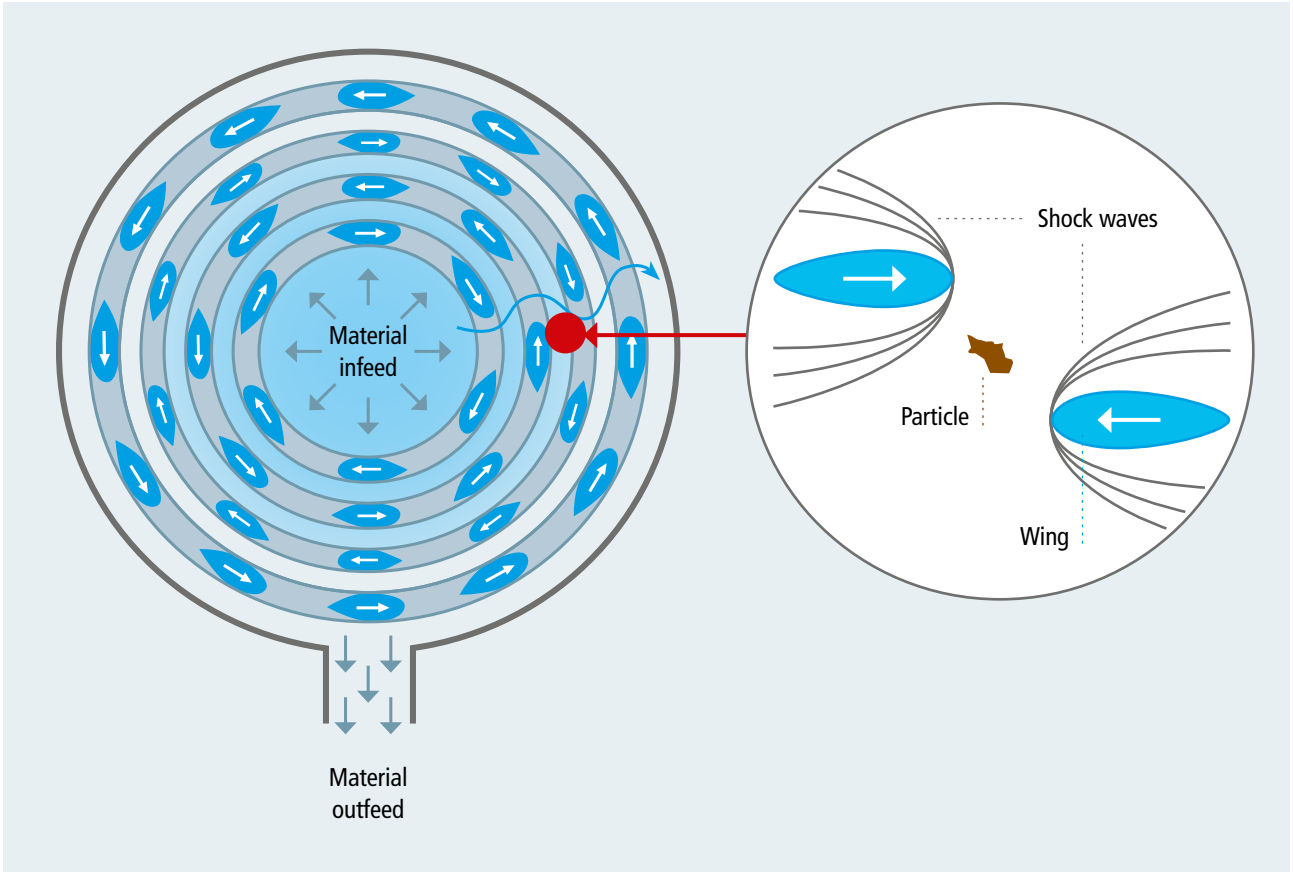
Example of annual energy consumption in kWh. Figures only serve for orientation and could be subjected to changes.

80 Percent – Energy saving potential!

Key advantages

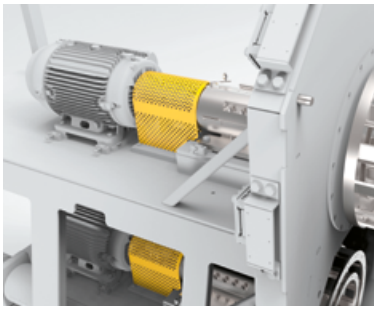
- High power efficiency – Up to 80 % energy saving compared to standard size reduction concepts
- Extremely low machine wear due to contactless size reduction
- Low maintenance cost due to long lifetime of tools
- Reduced risk of explosion due to high flow rate inside the machine
- High resistance against impurities like stones, glass, 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



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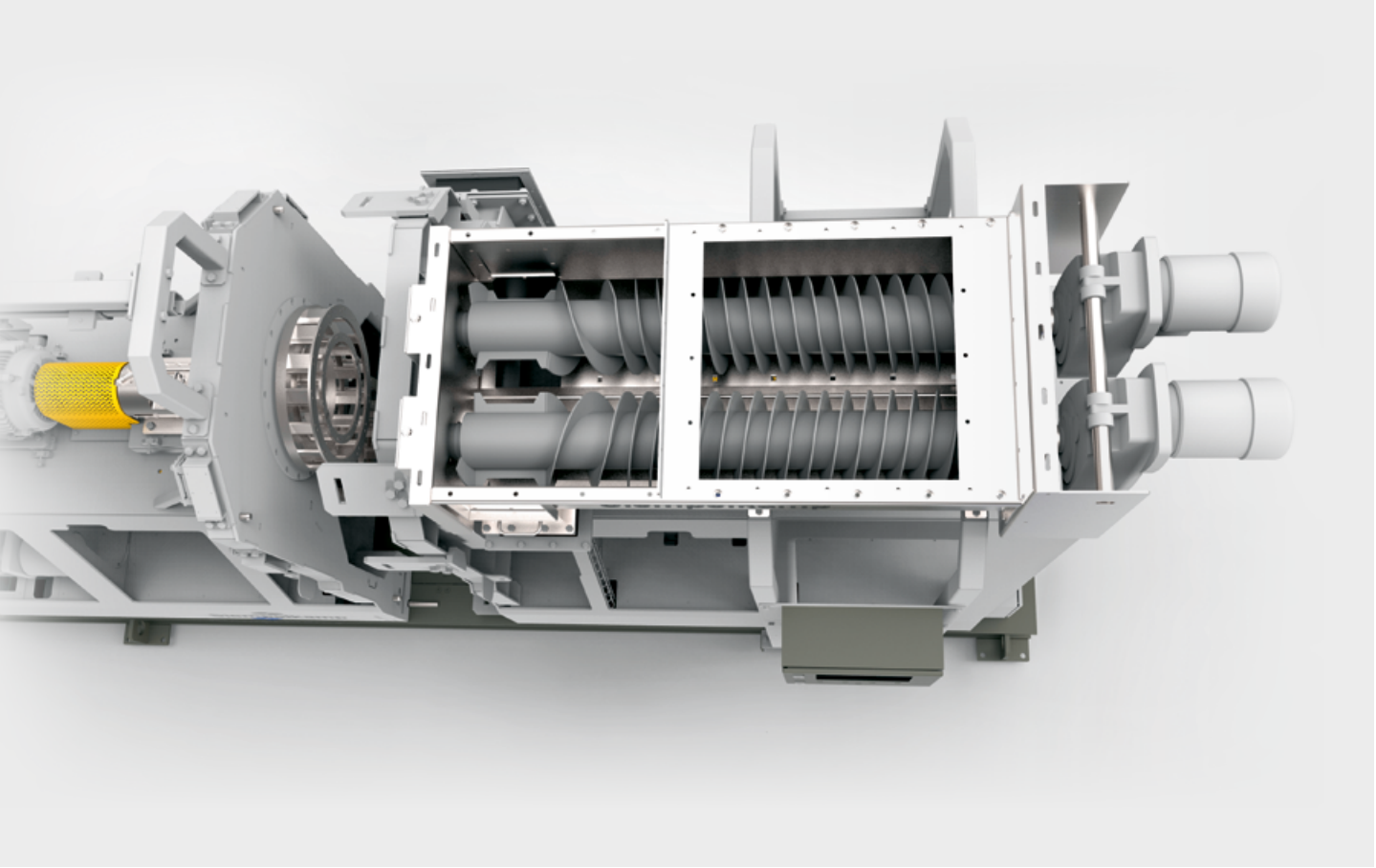

Technical data

	EcoPulser Single	EcoPulser Twin
Length	approx. 3.750 mm	approx. 5.050 mm
Width	approx. 1.300 mm	approx. 1.750 mm
Height	1.350 mm incl. infeed chute	2.850 mm incl. infeed screw
Weight	approx. 4.000 kg	approx. 8.000 kg
Installed power	approx. 44 kW	approx. 88 kW
Throughput capacity*	approx. 5 t/h production of SL in PB industry	approx. 10 t/h production of SL in PB industry
Max. infeed particle size	55 mm chip length	55 mm chip length
Revolutions	2.800 to 3.500 rpm	2.800 to 3.500 rpm

* Total throughput, SL Material has to be screened out. Based on dry material

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