Tana Application Guide
Tyre shredding

Basic information

End-of-life tyres for cars, trucks, aircraft, and heavy-duty vehicles are among the most problematic and difficult waste types to recycle. Impossible for other shredders with the same fuel efficiency and capacity, TANA high-torque shredders make it possible to shred tyres to a very homogeneous 80 mm (3″) particle size in just one pass and separate most of the metals during the shredding process. An over band magnet separates most of the metal wires directly from the shredded material flow on the conveyor. Once separated, shredded tyres and metals can be sold and reused in many ways.

The particle size can be adjusted by changing the counter-knife setting on the side door and choosing a suitable rotor screen. The bigger the particle size, the higher the capacity. By using the operating program for tyres, the machine automatically adjusts itself to the optimal level, thereby protecting the machine and optimizing operating costs.

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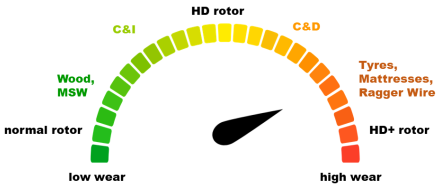
How to feed the TANA Shark

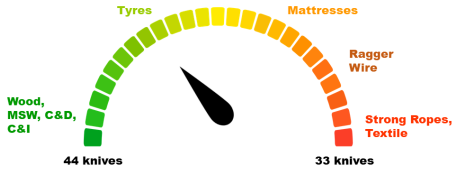
Preferred loading equipment: material handler

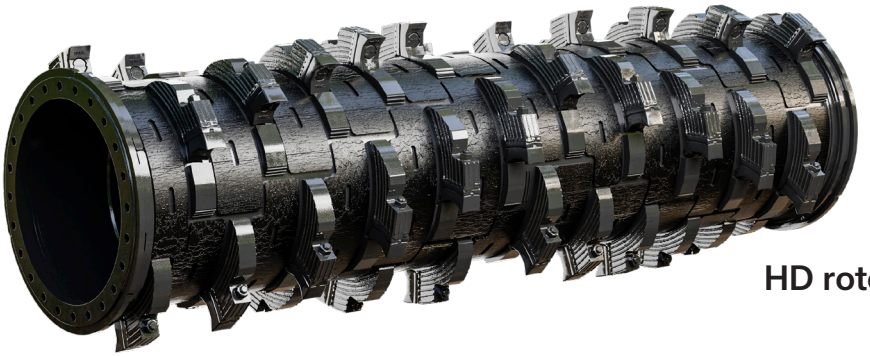
Try to feed a few tyres a time and to use the complete length of the rotor. Listen to the rotor, as long as you maintain the high gear you can increase your feeding frequency. Keep an eye on big tyres and bridging. When bridging happens push tyres with grapple.

Recommended configuration and additional equipment

- 44 knife rotor: to increase capacity up to 25%. The smaller the targeted particle size the bigger the impact of the 44 knives. For pre-shredding 33 knives is the preferable option.
- HD rotor (+): the HD+ rotor is recommended for the toughest material to ensure highest possible operational safety
- HD door: longer lifetime, specifically developed for tyre applications
- Standard magnet: best results on metal purity with 90mm and 109mm screens
- Rotor cooling: may be useful in dry and hot operating environments
- Short cleaning combs: With tough materials like tyres there can be significant forces caused to the cleaning combs







HD rotor

Screen settings

Screen setup as close to the rotor as possible to ensure that the screen stays clean and the particle size stays homogenous.

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End product

The Shark can produce chips as small as 50 mm in one pass. When using the smallest screen size a lot of smaller material will be created which can be screened out to produce wire free chips/crumb. In general, the shark produces TDS (Tyre Derived Shreds), ideally for the cement or paper industry or as a first shred in a more advanced process (WFS, Crumb, Carbon black...)

Applications after shredding

Asphalt companies buy large quantities of shredded rubber crumbs to mix with their hot melt asphalt to make pavements cheaper.

Shredded tyres are perfect for increasing the burning value of refuse-derived fuel (RDF) in incineration plants.

Other road construction companies purchase large quantities of medium-sized shredder tyres to use in road beds for minimizing vibration and for highway sound barriers.

Pure rubber can be granulated and used in the foundations of racetracks, playgrounds and garden beds. It is used in bark mulch to hold in water and prevent weeds from growing.

Tyre manufacturers are always looking for recycled tyres that can be reused to manufacture new tyres.

Landfill sites can use shredded tyres for leachate lines and to help them build new cells.

Steel mills can use shredded tyres as a carbon source by replacing the coal or coke during manufacturing.

Rubber tyres can be used in barriers for collision reduction, erosion control and rainwater runoff, as well as to protect piers and marshland from wave action.

Contact information:

Tana Oy
P.O.Box 160
Schaumanin puistotie 1
FI-40101 Jyväskylä

Tel. +358 20 7290 240
mail@tana.fi • www.tana.fi

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