



SHREDDER - SINGLE SHAFT HARD PLASTIC SHREDDER

The Shredder - Single Shaft Hard Plastic Shredder is a large single-shaft shredder known for its substantial internal volume. Its redesigned hydraulic pusher not only enhances power transmission and pushing speed but also effectively prevents material blockages and minimizes wear on the internal guide rails.

Shredder - Single Shaft Hard Plastic Shredder specially engineered device creates approximately 35% more space within the cutting chamber. The shredder in this series adopts a high-efficiency V-type rotor design. The rotor width ranges from a minimum of 1200mm to a maximum of 2000mm, with a rotation diameter of 560mm. An oversized gearbox drives the rotor, ensuring smooth operation at a low speed of 85rpm while delivering high torque.

The hydraulic station is intricately integrated into the shredder chamber, saving space and safeguarding the hydraulic station. This setup also facilitates easy maintenance and replacement. The entire machine undergoes welding using a specialized process, significantly enhancing overall stability and effectively preventing material splashing. Additionally, the HS series incorporates all the advantages found in other shredders, such as specially designed rotor knives and knife holders, external bearings, and user-friendly, advanced intelligent control systems.

The Shredder - Single Shaft Hard Plastic Shredder is purpose-built to meet recycling needs across diverse industries, handling various waste materials including bulk items, pipes, films, woven bags, electronic cable scraps, ICB buckets, waste paper, used wood, and different organic materials.

APPLICATIONS

- **Plastic Recycling:** Processes hard plastics, films, pipes, woven bags, IBC buckets, and packaging materials into reusable flakes for manufacturing.
- **E-Waste Management:** Shreds electronic cable scraps and other plastic-based electronic components for safer recycling and material recovery.
- **Paper & Wood Recycling:** Handles waste paper, cardboard, and wood for secondary processing, repurposing, and recycling.

- **Agriculture & Organic Waste:** Shreds agricultural residues and organic waste for composting, biogas generation, or biofuel applications.
- **Industrial Waste Processing:** Manages bulky industrial plastics, offcuts, and production waste to simplify disposal and enable recycling.
- **Logistics & Packaging:** Reduces transport packaging waste volume for efficient storage, handling, and recycling.
- **Customized Recycling Systems:** Integrates with conveyors, hoppers, and metal detectors to create tailored recycling solutions across multiple industries.

FEATURES

Shredder

BELT CONVEYOR

The plastic waste enters the shredder via a belt feeding mechanism.

This Single Shaft Hard Plastic Shredder utilizes an ABB/Schneider frequency converter for precise frequency control.

The speed of the belt feeding mechanism is synchronized with the shredder's capacity, automatically adjusting the conveyor belt speed based on the shredder's current load.

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METAL DETECTOR

An optional ferrous metal permanent magnetic belt or metal detector prevents metallic objects from entering the shredder, effectively safeguarding the shredder blades.

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HOPPER

A specially designed hopper prevents material scatter. The Single Shaft Hard Plastic Shredder features a spacious filling hopper that can be loaded by conveyor, forklift, crane, or wheel loader. The funnel can be customized to specific needs, supporting consistent and cost-effective material supply.

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HYDRAULIC RAM

The hydraulic pusher automatically feeds material toward the cutter using load-sensitive controls. The hydraulic system includes overflow valves and volumetric flow controls that can be adjusted to match input material requirements.

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ROTOR

The seamless-steel rotor measures 750 mm in diameter and runs at 52 rpm. Concave-ground, aggressive, 4-way rotating knives sit in rotor grooves, minimizing the cutting gap to the counter knives for high throughput, low power consumption, and maximum output.

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KNIFE BLADES

Blade material: DC53. After heat treatment, hardness is 62–64 HRC—higher than D2/SKD11—offering about twice the toughness, superior wear resistance, and significantly higher fatigue strength versus D2/SKD11.

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SCREEN

A screen beneath the rotor defines flake size. It's accessible via a separate flap for convenient replacement, and can be opened or closed using the hydraulic mechanism.

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SHREDDER CHAMBER

The chamber uses 30 mm ultra-high-hardness steel plates for wear and corrosion resistance, lower noise, and longer service life.

Motor

MOTOR

Equipped with a WEG motor for low energy consumption, reduced noise, and extended service life.

Recycling

ELECTRONIC CONTROL

Frequency-conversion control throughout the system; complies with international standards such as CE/CSA.

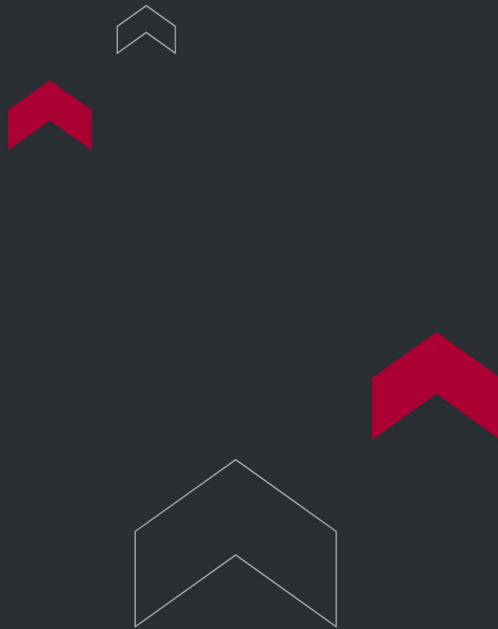
Shredder

TOOL INSTALLATION

Tools can be adjusted outside the machine, reducing downtime and simplifying replacement.

TECHNICAL SPECIFICATIONS

Item	Unit	TT-HS1200	TT-HS1600	TT-HS2000
Rotor diameter	mm	560	560	560
Number of rotor knives	pcs	105/112+29	136/148+38	180/192+49
Number of stator knives	pcs	2*3	2*4/2*3	2*5
Hydraulic feeding ram	kw	5.5	5.5	7.5
Feed opening	mm	1200*1850	1570*2025	1960*1570
Standard screen	mm	40-100	40-100	40-100
Chamber size	mm	800*1000	800*1290	800*1860
Motor	Kw	90	110	75*2
Machine weight	lbs.	19,841.6	24,250	28,660
Machine Size	Inches	88.4 X 101.2 X 94.1	88.4 X 116.5 X 94.1	88.4 X 129.9 X 94.1



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