



Technical resources

Small shredder

Model: EB

<https://www.tencanballmills.com/en/products/broken-series/small-shredder.html>

09.10.2026 / TENCAN

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Model: EB

Compact shredder efficiently crushes plastics, rubber, tires, and scrap into uniform flakes. Perfect for recycling and waste management.

Technical specifications

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Input speed	12-16 rpm
Maximum input torque	1600~2919Nm
Number of blades	24-26 pieces

These specifications describe the series. Confirm the selected model, power supply and configuration before ordering.



The shredder can generally be used to shred solid objects such as plastics, rubber, large tires, large nylon materials, rubber head materials, car bumpers, large pieces of fish nets, large pipes, fibers, paper, wood, electrical devices, cables, PET bottles, cardboard, circuit boards, wood, plastic barrels, etc. C shredders are also called scrap metal shredders and double-shaft shredders. Wood shredder, tire shredder, plastic shredder, pipe shredder, garbage shredder, circuit board shredder, rubber shredder, aluminum shredder, etc. The main function of this equipment is to squeeze large pieces of materials and large-diameter barrel metal materials that are inconvenient to transport through the shearing of the shredder, and shred them into sheet materials that meet the requirements.



Industrial waste/domestic waste - domestic waste, waste wood, kitchen waste, waste products, factory waste, municipal sludge, fiberglass, slurry tarpaulin;

Recycled materials - branches, leaves, straw, corn cobs, wheat straw, bark, garden waste;

Recycling waste materials - waste tires, waste paper, waste plastics, plastic bottles, chemical barrels, aluminum materials;

Product Documentation Destroy a computer hard drive, documentation, substandard products, expired drugs, plastic parts,

Waste treatment - medical waste, radioactive materials, organic waste, hazardous solid waste;

Metal solid waste - paint buckets, paint cans, iron and oil drums, metal scraps, aluminum scraps.

Technical parameters

parameter	EB300*200	EB400*200
motor	3KW-4, three-phase, 380V, 50Hz	4KW-4, 1 unit, three-phase 380V, 50Hz
Reducer	JL2#-32, 1 unit	JL3#-12, 1 unit
Electronic control	Thermal relay protection	-
input speed	16 rpm	12 rpm
Input/maximum input torque	1600Nm	2919Nm
Input shaft diameter	Φ50	Φ60
Blade specifications and materials	Φ180*12, 3Cr13 (food grade)	Φ180*15 9CrSi
Number of blades	24 pieces	26 tablets
Feed bin, discharge bin	304 stainless steel	-
frame	304 stainless steel	-
Other sheet metal and safety covers	304 stainless steel	-
Feeding port size (MM)	-	600*500*300

Width of unloading opening (MM)	-	420
Height of the unloading port from the ground (MM)	-	200
Machine dimensions (length*width*height MM)	1080*570*1330	1180*650*1450
Machine weight	Approximately 410 kg	about 500 kg
Scope of application	-	Light metal products, plastic products, food waste, wooden boards, paper, etc.

Material property analysis

- **Hardness and toughness:** Use thin blades for soft plastics, and thick blades for hard metals (HRC60° or above)
- **Moisture content:** Wet materials need to add anti-clogging design or choose an open structure
- **Capacity matching**
 - Reference formula: Theoretical output = (motor power × rotation speed) ÷ (material density × crushing ratio)
 - Example: 3kW motor-driven dual-axis model, when processing waste mattresses, the output can reach 5-8 tons per hour
- **Site and space restrictions**
 - For narrow spaces, vertical models are preferred, and horizontal designs with dust covers are recommended for open-air operations.
- **Budget and Maintenance Costs**
 - Although the initial investment of high-end models is high, the tool life is long (can be repaired by surfacing welding), and the overall cost is reduced by 20%.
- **Environmental Compliance**
 - Choose models equipped with automatic dust reduction systems and noise suppression technology to meet industrial zone emission standards

Feeding stage

- Materials enter the crushing chamber evenly through the funnel-shaped feed port, and large-size materials can be equipped with a pushing device to assist

- **broken stage**

- The motor drives the cutter shaft to rotate, and the movable knife and the fixed knife form a shearing force. With the hexagonal shaft surface design, the material can be torn in multiple dimensions.
- Some models adopt double-shaft reverse rotation, which increases the crushing efficiency by 40%.

- **Discharging and screening**

- The crushed materials are discharged through the bottom discharge port and can be connected to a conveyor belt or screening equipment for particle size classification.

1. The double-cutter shaft mechanism uses multi-piece and multi-claw cutters, and cooperates with the cutter shaft to change angles, saving labor during cutting.

It has strong cutting force and shows strong crushing ability.

2. The motor uses a gearbox transmission system as a transmission structure, with low speed and high torque to complete the crushing.

3. The large transmission wheel is made of high-quality steel and hardened by heat treatment to have a long service life.

4. The gear box adopts an oil-inlet pulley, which has smooth operation, low noise, high torque, and can withstand long-term operation.

5. The design of low speed and high torque provides lower noise and less dust, maintaining a good working environment.

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Before operation, review the selected model's instructions and the material requirements.