

BULKY WASTE PROCESSING SYSTEM - TORONBWS™ 100



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Bulky Waste Processing System reduces oversized household and commercial waste into manageable, separable material in a single processing pass. Waste management facilities, municipal transfer stations, and recycling operators use the system to break down mattresses, sofas, cabinets, and tables and chairs into a form that is easier to transport, sort, and route into downstream recycling or alternative fuel streams. The system integrates a metal chain plate conveyor, a dual shaft shredder, a magnetic separator, and a belt conveyor into one connected line.

Bulky items load onto the metal chain plate conveyor, which lifts and feeds the material into the dual shaft shredder for size reduction. As the shredded output moves forward, the magnetic separator pulls ferrous metal, such as mattress springs and cabinet hardware, out of the material stream before it reaches the belt conveyor. The belt conveyor then carries the remaining shredded material to the downstream treatment or baling stage, keeping the process continuous rather than batch-fed.

The system runs under negative pressure dust collection to contain particulate generated during shredding, and an intelligent control system coordinates the conveyors, shredder, and separator so the line runs with minimal operator intervention. Torontech built the Bulky Waste Processing System for facilities that need to cut the volume and weight of bulky waste before it moves further into a recycling or disposal chain.

APPLICATIONS

Bulky Waste Processing System - ToronBWS™ 100 Applications

Applicable Materials



Waste Mattress



Waste Sofa



Waste Cabinets



Waste Tables & Chairs

The Bulky Waste Processing System handles bulky, awkwardly shaped waste streams that standard shredders and compactors struggle to process whole.

- **Furniture and Mattress Recycling Facilities:** reduces sofas, mattresses, cabinets, and tables and chairs to a manageable particle size and liberates embedded steel springs and frames for recovery
- **Municipal Solid Waste Transfer Stations:** cuts the volume of curbside bulky-item pickups before transport, lowering the number of loads needed to move material offsite
- **Bulky Item Collection Programs:** processes items collected through municipal or retailer take-back programs, including old mattresses and box springs
- **Scrap Metal Recovery Operations:** recovers ferrous metal such as springs, frames, and hardware from shredded furniture and bedding for resale as scrap
- **Alternative Fuel (RDF) Preparation:** reduces bulky combustible waste to a size suitable for feeding into refuse-derived fuel production lines
- **Landfill Diversion Programs:** shrinks bulky waste volume to extend landfill capacity and support diversion targets at disposal facilities



FEATURES

Bulky Waste Processing System - ToronBWS™ 100 Key Features

The Bulky Waste Processing System combines shredding, metal recovery, and material handling into a coordinated line rather than a series of standalone machines.

- **One-Pass Shredding:** reduces bulky items to a manageable particle size in a single pass through the dual shaft shredder, without a secondary shredding stage
- **Negative Pressure Dust Collection:** contains airborne particulate generated during shredding at the source, supporting a cleaner work environment
- **Intelligent Control System:** coordinates the conveyor, shredder, and separator automatically, reducing the need for manual operator adjustment during operation
- **dual shaft shredder:** uses two counter-rotating shafts to shear and tear apart mixed-composition bulky waste without frequent jamming
- **Metal Chain Plate Conveyor:** feeds bulky items into the shredder at an inclined angle, supporting continuous loading of large or heavy items
- **Magnetic Separator:** recovers ferrous metal from the shredded material stream for scrap resale before the material reaches downstream processing
- **Belt Conveyor:** transports separated material to the downstream treatment stage, keeping the line running continuously

THEORY & METHOD

Theory and Method

The dual shaft shredder reduces bulky waste through a low-speed, high-torque shearing action. Two counter-rotating shafts fitted with interlocking cutting discs pull material inward and tear it apart between the shafts rather than cutting it with a single blade edge. This shearing and tearing action lets the shredder break down irregular, mixed-composition items, such as a mattress combining foam, textile, and steel springs, without the jamming that a single-shaft or high-speed cutter would experience on the same material.

After shredding, the magnetic separator removes ferrous metal from the mixed material stream using a fixed or belt-mounted magnet positioned above the material flow. As shredded material passes beneath the magnetic field, ferrous fragments, such as mattress springs, hinges, and metal frame sections, are pulled upward and out of the stream while non-magnetic material continues forward on the belt conveyor. This separates recoverable scrap metal from the remaining shredded waste without manual sorting.

The negative pressure dust collection system draws air, and any airborne particulate generated during shredding, into an extraction point rather than allowing it to disperse into the surrounding work area. This keeps dust contained at the source, near the shredder infeed and discharge, and supports a cleaner operating environment for staff working near the line.

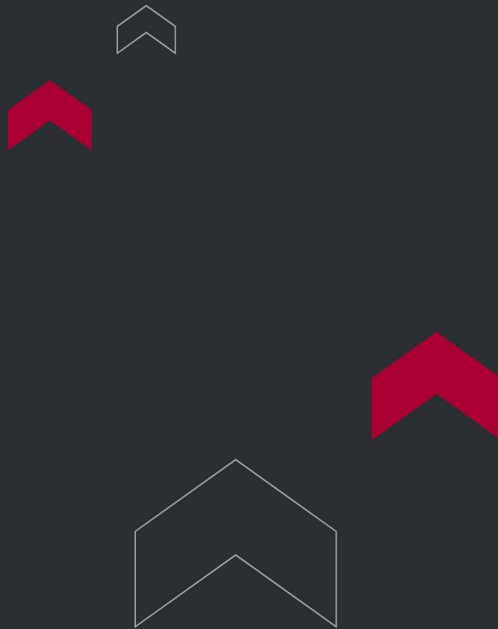
TECHNICAL SPECIFICATIONS

Bulky Waste Processing System - ToronBWS™ 100 Technical Specifications

Component	Description
Feeding Method	Metal chain plate conveyor, inclined feed
Primary Reduction	dual shaft shredder
Metal Recovery	Magnetic separator (ferrous)

Component	Description
Material Discharge	Belt conveyor
Dust Control	Negative pressure dust collection system
Control System	Intelligent/automated control
Processing Mode	One-pass shredding

Tell us what you're processing, testing, or measuring, and our team will help you find the right configuration. [Contact the Torontech team](#) for pricing and lead times.



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