



WOVEN BAG WASHING RECYCLING MACHINE TT-AWS-PP

We offers a Woven Bag Washing Recycling Machine TT-AWS-PP for recycling various PP and PE scraps, including LDPE/LLDPE film, PP woven bags, PP non-woven materials, PE bags, milk bottles, cosmetic containers, and vegetable and fruit boxes. Our innovative modular design enables us to blend standard modules seamlessly, delivering customized solutions to our customers.

Introducing the Woven Bag Washing Recycling Machine TT-AWS-PP, specifically designed for HDPE/PP/PS/ABS/PC/PET recycling projects. Materials primarily originate from urban and industrial collection sites, exhibiting varying sizes and compositions that differ between countries and even within the same country for HDPE/PP/PS/ABS/PC/PET materials.

Our team amalgamated cleaning line technologies, continually refining and optimizing them. This effort culminated in a series of modular recycling equipment tailored to accommodate the distinct characteristics of HDPE/PP/PS/ABS/PC/PET materials. The AWS series aims to process both hard and flexible plastic materials, offering a comprehensive solution that includes sorting, crushing, cleaning, recycling, and pelletizing for blow-molded packaging waste.

The process encompasses sorting, size reduction, metal removal, cold and hot washing, high-efficiency friction washing, and drying modules. These modules efficiently eliminate ferrous and nonferrous metals, sand, oil, glue, paper, and various other contaminants with high efficiency.

APPLICATIONS

- **Woven Bag Recycling:** Cleans and recycles PP woven bags, cement bags, and agricultural sacks into reusable flakes.
- **Non-Woven Materials:** Processes PP non-woven fabrics commonly used in packaging, textiles, and disposable products.
- **Film & Bag Recycling:** Handles LDPE/LLDPE films, PE shopping bags, and flexible packaging films.
- **Bottle & Container Recycling:** Washes and reprocesses HDPE/PP milk bottles, cosmetic containers, and household packaging.
- **Rigid Plastic Recycling:** Processes vegetable boxes, fruit crates, and other injection-molded plastics into clean flakes.

- **Mixed Plastic Waste:** Treats HDPE, PP, PS, ABS, PC, and PET waste from municipal, industrial, and post-consumer sources.
- **Contaminant Removal:** Eliminates metals, sand, oil, glue, paper, and other impurities to achieve high-purity recycled output.
- **Pelletizing Preparation:** Delivers clean, dried, and uniform flakes ready for extrusion and pelletizing systems.

FEATURES

Input Belt Conveyor

INPUT BELT CONVEYOR

Heavy-duty feed conveyor engineered for shredders, featuring load-responsive control to prevent overfeed.

Optional inline metal detector shields the shredder from ferrous contaminants.

PVC or rubber belts with inverter-driven speed deliver smooth, adaptive dosing.

Shredder

SHREDDER

+35% larger cutting chamber for higher throughput.

Integrated hydraulic ram with faster, variable stroke in a compact footprint.

Enclosed chamber minimizes fly-outs and elevates operator safety.

L Type Belt Conveyor

L TYPE BELT CONVEYOR

Continuous clean-water wash with 3D agitation for thorough mixing.

~30-minute retention time, autonomous water treatment, and optional hot-water prewash.

Independent temperature control across multi-zone sections enhances cleaning efficiency.

Magnetic Separation Belt

MAGNETIC SEPARATION BELT

Optional permanent-magnet separator at shredder discharge automatically removes ferrous metals—protecting downstream equipment and improving purity.

Pre-Washer

PRE-WASHER

Stainless steel tank with discharge drum and dual heavy-material outlets (motorized valves).

Pneumatic water in-feed, electronic level control, and bottom aeration for efficient separation.

Integrated platform design conserves both water and energy.

Wet Crusher

CRUSHER

Water-flushed size reduction with 3/5/7-knife rotor options.

External knife adjustment simplifies maintenance.

Low-noise design suited for continuous operation.

Friction Washer

FRICTION WASHER

Robust stainless housing with reinforced mild-steel rotor scrubs off labels, organics, and fines.

3 mm SS screen, oversized external bearings, SS feed/discharge hoppers, and bottom water discharge for efficient slurry

removal.

Floating Washer

FLOATING WASHER

Separates high-density contaminants ($>1 \text{ g/cm}^3$) from PE/PP flakes via screw-in/out conveying and tuned paddles for effective settling.

SUS304 body, pneumatic water in-feed, and automatic level control ensure stable operation.

Drying Systems

DRYING SYSTEM

Tailored drying packages by material:

- Films/soft: squeezer or centrifugal dryer (post-dry 5–8% moisture).
- Rigids: centrifugal + pipeline dryer (post-dry $<1\%$ moisture).

Optimized for low energy use and consistent dryness.

Storage Silo

STORAGE SILO

Buffer silo stabilizes flow and ensures uninterrupted feeding to extrusion/pelletizing.

Anti-bridging geometry with top-mounted cyclone efficiently removes residual dust.

Electrical Cabinet

ELECTRICAL CABINET

System control built around premium components (Schneider, LS, ABB).

Circuit breakers, contactors, pushbuttons, and pilot lamps employ safety-interlock logic for reliable, standards-compliant operation.

TECHNICAL SPECIFICATIONS

Device parameters			
Size	Capacity	Motor Power	Equipment footprint
TT-AWS PP BAGS 05	500kg/h	560KW	150m 2
TT-AWS PP BAGS 10	1000kg/h	680KW	300m 2
TT-AWS PP BAGS 20	2000kg/h	750KW	450m 2
Unit energy consumption			

Content	Average energy consumption per ton of bottle
Electricity	65-85KW
Water	4-6.5T
Detergent (optional)	4.4-8.8 lbs.



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