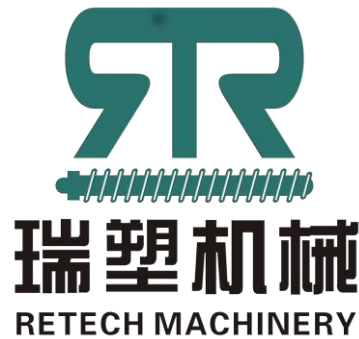


PE Film Recycling Solution



Overview

- LDPE/LLDPE Film Recycling Solution is a full turnkey plastic recycling system designed for post-consumer and post-industrial LDPE & LLDPE flexible films. The complete line covers pre-shredding, feeding, crushing, multi-stage friction washing, floating separation, dewatering, squeezing and drying. It converts heavily contaminated waste film into clean low-moisture LDPE/LLDPE flakes, ready for downstream pelletizing.

Applicable Materials

- Agricultural LDPE film, greenhouse film, mulching film
- Industrial stretch wrap, LLDPE pallet wrapping film
- Mixed LDPE & LLDPE soft films with light to heavy dirt, soil and residual glue



Full Process Flow

- **Pre-shredding & Feeding** Single shaft shredder cuts bulky rolled or bundled film into smaller pieces. Belt conveyor feeds shredded film continuously to avoid material winding.
- **Crushing** Film crusher cuts pre-shredded film into uniform small flakes for better washing effect.
- **High-speed Friction Washing** Friction washer generates strong scrubbing force to remove soil, dust, ink and light glue from film surfaces.
- **Floating Washing & Heavy Impurity Separation** LDPE/LLDPE flakes float on water; sand, stones and metal sink to the tank bottom and are discharged automatically.
- **Hot Washing (Optional for heavy contamination)** Hot caustic washing tank (70–90°C) removes stubborn oil, aged glue and heavy dirt for higher flake quality.
- **Rinsing** Multi-stage fresh water rinsing washes away residual alkali and fine contaminants.
- **Squeezing & Dewatering** Squeezer mechanically squeezes wet flakes to reduce moisture from 30~40% down to 2~3%. Optional centrifugal dewaterer and hot air dryer.
- **Flake Collection** Clean LDPE/LLDPE flakes are collected and conveyed to pelletizing line.

Core Advantages

- **Specialized for flexible film:** Optimized anti-winding structure solves film tangling issues during continuous operation.
- **Squeezer integration:** Greatly cuts drying energy cost and eliminates air trapping for the subsequent granulation process.
- **Modular layout:** Add hot washing unit or metal detector according to raw material pollution level.
- **Circulating water filtration system:** Water reuse reduces water consumption and running cost.
- **PLC automatic control:** Stable continuous running, low labor cost and simple maintenance.
- **Customizable capacity:** 300kg/h ~ 2000kg/h available.

Key Units:

Film Shredder



Film Crusher



Key Units:

Friction washer



Washing tank



Key Units:

Dewatering Dryer

Storage hopper

