Flyer Case study PVC en 22/22 220489 Z&B

Rework via recycling

Case study – PVC

Recycle plastic waste into door and window frames

Plastic recycling involves repurposing all non-biodegradable plastic into new and useful products. Recycling plastic has become increasingly pertinent these days due to the irreplaceable damage it has been causing the planet. Presently, almost all recycling is purely mechanical and involves remelting and reforming used plastic into new items.

PVC is one among many types of plastic polymers that are not often recycled owing to their melting temperatures. The more common uses for this type of plastic are as stretch wraps for non-food items, electrical cable insulation, rigid piping, and vinyl records.

Recycled PVC pellets are a fantastic cost-effective solution to install robust doors and window frames due to their easy molding capabilities. Customers can provide eco-friendly solutions while reducing the carbon footprint.

Bühler is renowned worldwide for supplying optical sorting solutions to the food and non-food industries. This solution can be applied to all areas of the plastic recycling industry like removing unwanted polymers in packaging waste and removing defects in petrochemical materials.

The Sortex B range has been designed to Bühler's stringent quality standards. Dependable, reliable performance is assured while the cutting-edge design ensures durable machine quality and consistent optical sorting performance.

The Sortex B3 MultiVision can be implemented in plastic extrusion companies at their recycling zone to separate by color the shredded frames, pipes, etc., thereby improving efficiency in recycling PVC and any other polymer. The SORTEX® range is available in three frame sizes to suit all capacity requirements for mainstream sorting.

Benefits

- Safer, efficient, automated, and better recycled material quality
- Lesser number of people required to man the machine thereby reducing labor costs
- No mechanical separation is required before shredding thus saving time and effort
- Increased productivity
- Recycle all materials regardless of shape or size

Technical figures

Sorter	Sortex B3 MultiVision
Configuration	3 passes
Capacity	1,000 lbs./h
Accept quality	99.9%+
Reject	15%
Reject concentration	75%

Recyclable materials

- Out of spec, quality control frames
- Customer returned goods
- Low-cost PVC frames
- Produce from extrusion batches
- R&D testing materials

Key benefits of an optical sorter

Before optical sorting		After optical sorting
12 people (4/shift)		9 people (3/shift) (-150,000 USD/year)
Using a saw before shredding to remove most unwanted colors, which requires high precaution and skill		No mechanical separation required before shredding
Time consuming mechanical separation performed manually		Time saving fully automated optical sorting
Complex shaped frames were not possible to rework		All shapes can be reworked via recycling easily
Storage optimization 1,200 sq ft used for PVC frames storage		No PVC frame storage needed

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