Heavy Picker 4.0

The world's strongest robot in bulky waste sorting, achieving high-purity fractions with unrivaled **precision** and **efficiency**.

Overview

ZenRobotics Heavy Picker is the world's first robotic waste sorting solution designed exclusively for waste sorting.

The Heavy Picker can sort several high-purity fractions, weighing up to 40kg, simultaneously with the help of heavy-duty arms and high IQ artificial intelligence.

The Heavy Picker is a fully autonomous sorting robot that can be retrofitted to an existing capacity or set up as a standalone sorting station that only requires space on site.

Our Heavy Picker provides a simple, unmanned sorting process and makes waste sorting safer, more accurate and profitable.

ZenRobotics Safe Sorting Robots automate waste sorting and make outdated inefficient and unsafe manual sorting a thing of the past.

Features

✓ As many robotic arms as required

✓ Advanced AI powered recognition system with deep learning algorithm

✓ Trained to recognise the most relevant material categories - 500 and counting!

✓ Online reporting tool for analysis of waste

✓ Feed Rate Control to optimise material flow and enable 24/7 operations

✓ Adjustable material purity for individual fractions

ZenRobotics 4.0

Revolutionising Sorting Technology - Efficiency Perfected!

⌄ Fully **automated** and **independent** waste sorting station

Feeding Bunker

Discharge Conveyor

Magnetic Separator

NEW: Sensor Recognition System before each Robot

NOW: up to as many robot arms as required

NOW: up to as many fractions as required

Dosing Conveyor

Vibratory Feeder

Waste Types

Heavy Picker easily adapts to a wide range of sorting needs. It can sort multiple fractions, various shapes and different sizes at the same time – and even prioritise the most valuable objects to maximise profits.

Construction & Demolition Waste (C&D)

- Wood by grade (A/B/C/D wood)
- Inert mixed and by type: bricks, concrete,stones etc.
- Rigid plastics mixed or by polymer
- Metals

Commercial and Industrial Waste (C&I)

- Rigid Plastics mixed or by type
- OCC
- Wood mixed or by type
- Metals

Rigid Plastics

- Plastics from mixed waste
- PP, PE, PVC, PET etc.
- Plastics by shape, size and or colour
- Black plastics

Mixed Inert

- Stones
- Bricks
- Asphalt
- Gypsum
- Concrete etc.

Scrap Metals

- Metals by shape, colour, brass, aluminum, zinc, copper, stainless steel etc.
- Metals by type: Iron scrap, copper wires, "meatballs" etc.
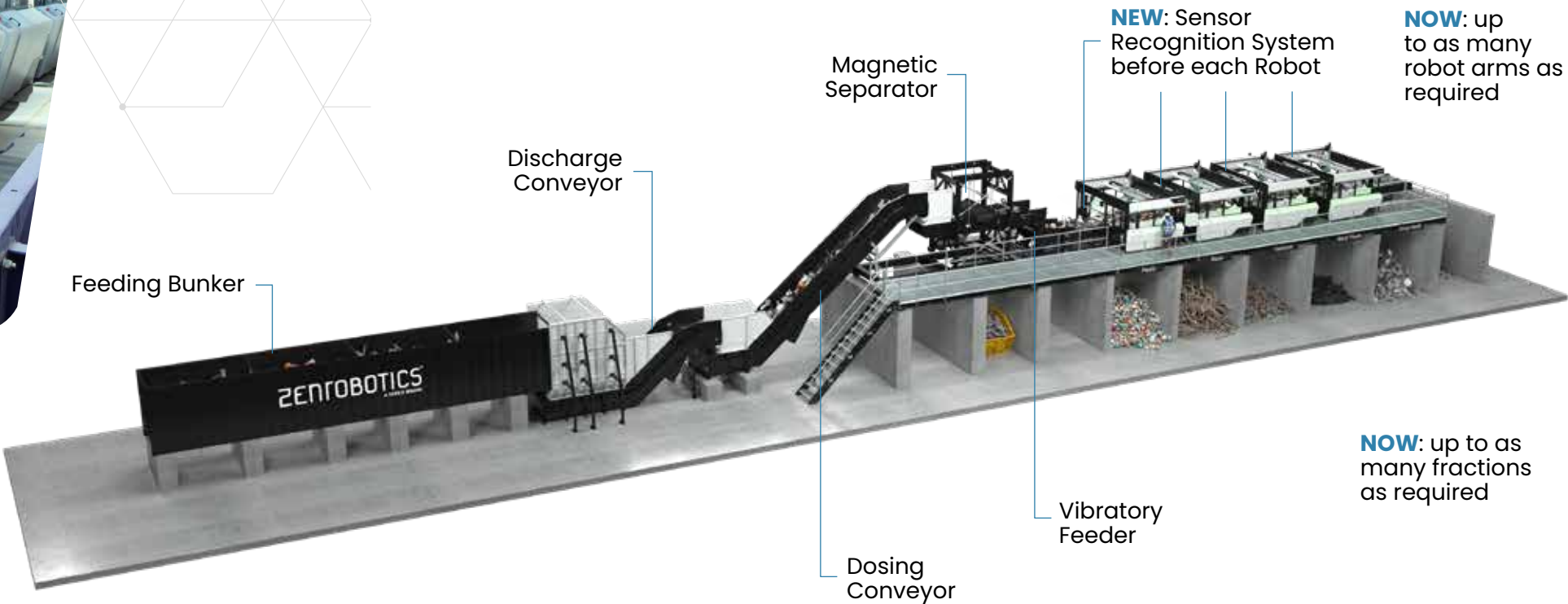- Contaminants

MSW

- Bulky waste
- Bag sorting by colour

Benefits

- ✓ Increase Recovery Rates
- ✓ Improve Sorting Quality
- ✓ Uninterrupted Sorting
- ✓ Enable 24/7 Operations
- ✓ Minimise Pre-shredding
- ✓ Reduce Human Risk to Harsh Environments
- ✓ Safe Sorting
- ✓ Digitisation of Waste

Installation Options

1 Standalone

Set up as a standalone sorting station requiring no modifications to existing facility infrastructure

2 Retrofitted

Retrofitted to complement existing facility infrastructure

3 Greenfield

Set up as the main sorting station for a fully robotized greenfield installation.

Technical Specification

Robot Arms	As many as required		Discharge Chutes	Up to 4 per Arm
Sensor Units	1 sensor unit per robotic arm		Max. Object Weight	40 kg (88 lb)
Gripper Type	Mechanical Gripper		Max. Object Size	1500 mm x 500 mm x 400 mm (60' x 20' x 16')
Max. Speed per Arm	2300 Picks per Hour*		No. of Recognised Fractions	Unlimited
Sorting Belt Speed	0.1 - 0.6 m/s (20-118 fpm)			
Unit Length	4161 mm (13' 8")		Installed Power (1 robot)	8.3 kW (11.2 HP)
Unit Width	5265 mm (17' 3")		Air Consumption	Pressure of air supply: 7 bar (100 psi) 60 l/min (2 CFM)
Unit Height	3800 mm (12' 6")			
Unit Weight	3000 kg (6614 lbs)		Noise Level	<85 dB(A)

100% utilisation in ideal conditions. Technical specification subject to change. *Actual picking speed depends on material feed.

ZENROBOTICS®
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