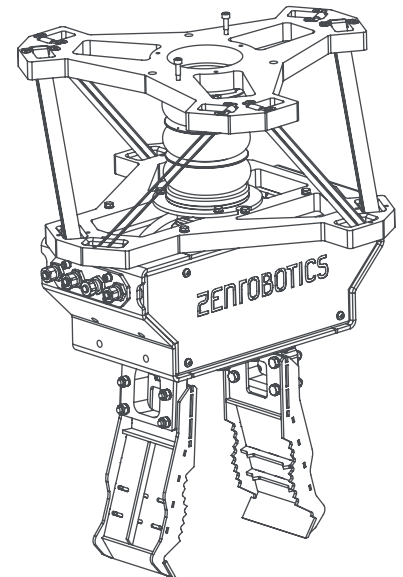


ZENROBOTICS

HEAVY PICKER



ZenRobotics Heavy Picker is the world’s first robotic waste sorting solution. Designed specifically for waste sorting, our AI-powered sorting robots extract high-purity fractions from various waste streams. Intelligent robots adapt to a wide variety of sorting needs, allowing customers to make the most value of their waste - efficiently and profitably.

Our unique solution combines our own robot design, fit exclusively for waste sorting, with our own artificial intelligence (AI) software, called ZenBrain. The durable heavy-duty robots, AI software that can be easily upgraded and our in-house support guarantee a safe investment.

PRODUCT FEATURES

Robot arms	1, 2 or 3
Sensor units	1
Gripper type	Mechanical Gripper
Maximum speed per arm	2300 picks/h, HP+, 2000 picks/h, HP
Sorting belt speed	0.1-0.7 m/s, 20-138 fpm
Unit length	6125 mm – 13725 mm, 20’ 1” – 45’
Unit weight	4700 kg – 11300 kg, 10362 lb – 24912 lb
Working area (1 robot)	2000 mm x 1800 mm, 6’ 7” x 5’ 11”
Discharge chutes	Up to 6 / arm

Maximum object weight	30 kg, 66 lb
Maximum object size	L 1500 mm, W 500 mm, L 60“, W 20”
No. of recognized fractions	Unlimited
Installed power (1 robot)	10 kW, 13.4 hp
Air consumption	120 l/min/gripper at 6 bar, 4.2 cfm at 87 psi
Noise level	< 80 dB(A)
Availability	> 90%
Warranty	1 Year or 3000 h

Technical specifications subject to change.

HEAVY PICKER CAN BE SET TO PRIORITIZE THE MOST VALUABLE OBJECTS TO MAXIMIZE YOUR PROFITS.

OPTIONAL FEATURES

- Sorting Belt Speed Control - Belt speed adapts to waste stream.
- Reporting Tool - On-line analysis of waste and sorting results.
- Feed Rate Control - Signal and sensors to control upstream feeding and dosing equipment.

SCOPE OF DELIVERY

The delivery of a complete Heavy Picker system includes a sensor unit, a control system, 1-3 robot arms, fraction chutes and a safety cage.

SMART SORTING WITH ZENBRAIN

The core of ZenRobotics’ technology is our own AI software, ZenBrain. It allows robots to operate in a complex 3D environment. Robots can avoid piles, pick with high precision from a dense feed, or pick only the most valuable objects.

ZenRobotics robots sort waste based on real-time sensor input, combining sensory data from multiple sensors, and make autonomous decisions on what objects to pick and how. Sensors include: NIR – hyper spectral imaging sensors, 3D sensor system, hi-res RGB camera, metal imaging sensor, VIS – visual light spectrum sensor.

Our experience has increased our understanding of how robots need to perform in waste sorting. We analyze data from our global reference sites and use that for further developing the systems. Upgrades are available as software and mechanical updates, making the system future- proof.

ZENROBOTICS

HEAVY PICKER



Heavy Picker is a multipurpose sorting robot that easily adapts to a wide range of customer needs. It's ideal for heavy and bulky materials, minimizing the need for pre-shredding of waste. Heavy Picker also reduces the need for pre-sorting with an excavator.

Heavy Picker can sort C&D, C&I, scrap metal, rigid plastics, inert and more. Its robust gripper easily picks up objects weighing 30 kg / 66 lbs and adapts to objects of various shapes and sizes. Heavy Picker sorts simultaneously several different fractions with very high precision, reaching up to 99% purity.

**SIMPLE AND
UNMANNED
SORTING
PROCESS 24/7.**

RIGHT ROBOT FOR EVERY SORTING TASK

COMMERCIAL & INDUSTRIAL WASTE

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

CONSTRUCTION & DEMOLITION WASTE

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

WOOD

- A-wood, B-wood, C-wood, D-wood

INERT

- Stones, bricks, asphalt, gypsum, concrete etc.

RIGID PLASTICS

- Plastics from mixed waste
- Plastics by polymer: PP, PE, PVC, PET etc.
- Plastics by shape, size and/or color

SCRAP METALS

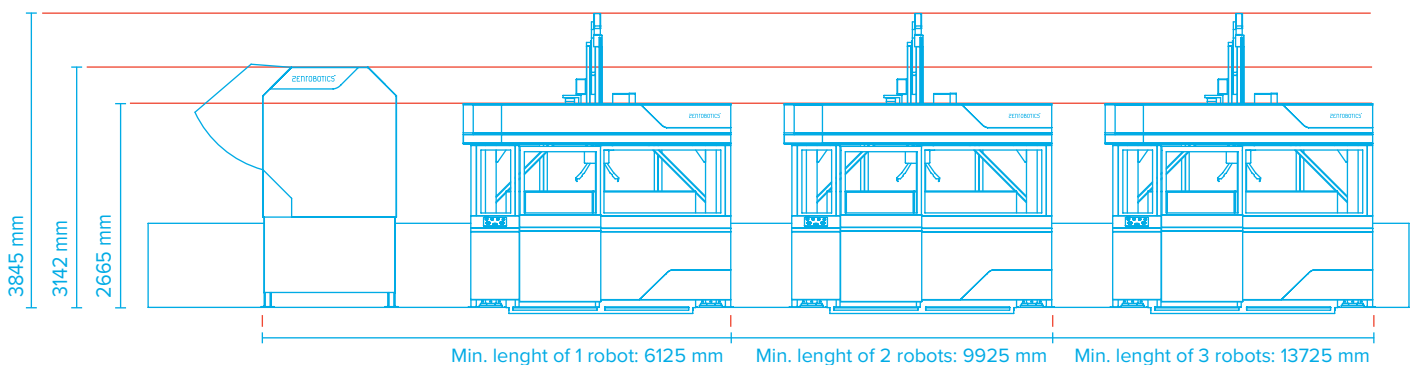
- Metals by shape/color: brass, aluminum, zinc, copper, stainless steel etc.
- Metals by type: iron scrap, copper wires, "meatballs"
- Contaminants

COLORED PLASTIC BAGS (MSW)

- Bags by color
- Negative and positive sorting

BENEFITS

- Replace manual processes
- Replace excavator hours
- Increase safety
- High-purity fractions
- Multiple waste applications
- Online waste composition analysis
- Adjust sorting tasks and purities on your mobile
- Allows 24/7 non-stop sorting
- Hybrid sorting; positive & negative sorting at the same time



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