ZENROBOTICS®

ZenRobotics Recycler

Robotic Waste Sorting System

Machine Learning Sensor Fusion Adaptive Picking

Robots to the rescue!

The ZenRobotics Recycler is a robotic waste sorting system. Built from standard industrial components, the system applies machine learning to identify valuable raw materials in waste. The ZenRobotics Recycler is engineered for construction and demolition (CND) waste.

The ZenRobotics Recycler can reclaim clean, specific fractions while improving the efficiency of existing waste processing facilities. This prevents important raw materials from ending up in landfills and furnaces.

ZenRobotics Recycler can be readily software-updated e.g. for performance tuning or even new fractions, making the system a safe investment. Welcome to the robotic future of recycling!

Why Are Cars Made by Robots?

Today most products we use are made by industrial robots. However, in waste management robots are virtually unknown.

Robots have never before been able to operate in the complex, changing and varied roles – that typically arise in waste management. Now ZenRobotics is introducing robots controlled by artificial intelligence that can break through this old barrier and get down to the dirty work.

The ZenRobotics Recycler uses multiple sensor inputs to identify items and raw materials. The fusion of sensor data allows an accurate analysis of waste – for the first time ever.

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ZENROBOTICS®

The Autonomous Industrial Robot.
Join the revolution!

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ZenRobotics Recycler

TECHNICAL DATA
2014

Common features for all models

• Maximum object weight	20 kg
• Pickable object size	max length 1,5 m, max width 0,5 m
• Picking area of each robot arm	width 1,4 m, length 2 m

Model specific features

	ZRR2	ZRR1
Maximum picking speed: (with max 5kg objects)	up to 4000 picks/h	up to 2000 picks/h
Robot arms:	two robot arms	one robot arm
Length: (including safety cage)	9,5 m	6 m
Power consumption:	15 kW	10 kW

Separated materials

- Wood based materials mixed
- Inert materials mixed

Optional features

- Mixed metal sorting capability (ferrous and non-ferrous)
- Mixed rigid plastics sorting capability

Options:

- Mixed metal sorting
- ZenRobotics Sorting Belt Speed Control
  (System for automatic control of sorting belt speed)
- ZenRobotics Feeding Rate Control
  (Signal and sensors for controlling feeding devices)
- Winter version
  (for down to -10 Celsius)
- Semi-mobile version
  (Delivery includes sorting belt, robot safety cages, drop off chute collars and internal electrification preinstalled on a semi-mobile platform)
- Mixed rigid plastics sorting capability
- Software license

Other terms:

- 95% availability
- Warranty period 1 year / 4000 h
- Shipment approx. 16 weeks from order
- Further terms and details to be agreed separately
- Delivery term FCA Helsinki, Incoterms 2000