Green Innovations:

Eco-Friendly Equipment

ROBOSERVER

RoboServer Corporation

www.roboserver.com.au

The Global Challenge- Food Waste & Emissions

ROBOSERVER

- Food wastes in landfills release harmful greenhouse gases during the decomposition process.
- The Food and Agriculture Organization (FAO), estimates one-third of the world's food is wasted annually.
- Up to 10% of total global greenhouse gases comes from food that is produced, but not eaten.
- Waste food emission are worse than combined emissions from flying (1.9%), plastic production (3.8%) and oil extraction (3.8%).
- If food waste was a country, it would be the third biggest emitter of greenhouse gases after USA and China.

https://www.ifco.com/countries-with-the-least-and-most-food-waste/

Our Challenge: Food Waste & Emissions

ROBOSERVER

- The Australian economy loses $36.6 billion per year due to food waste, with 7.6 million tonnes of food discarded annually.
- Waste Foods in landfills produce 17.5 million tonnes of greenhouse gases – almost **equivalent to our total road transport emissions**.
- Food rotting in landfill releases methane – 28x stronger than CO_2
- **It takes 25 years for a head of lettuce to decompose in landfill**
- Reducing food waste is the most effective thing individuals can do to address climate change

Watchmywaste Calculator

https://www.foodbank.org.au/

https://www.ozharvest.org/food-waste-facts/

RoboServer: Revolutionising Waste Management

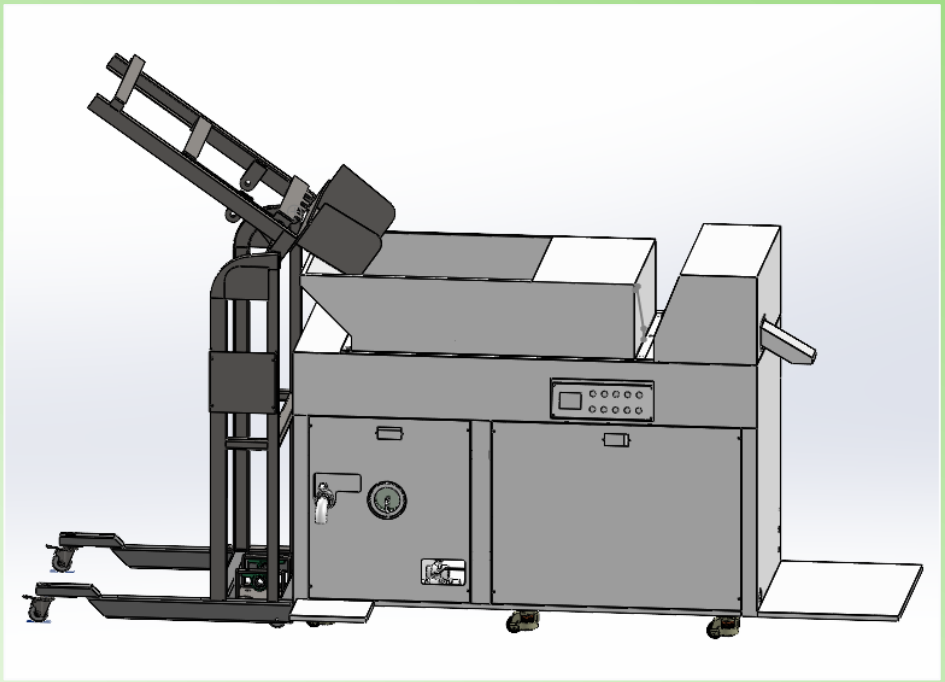
- Our process encompasses on-site crushing, volume reduction, separation of solids and liquids, and recovery of bio-oils and water.
- Our solution plays a pivotal role in mitigating environmental impact while actively contributing to circular economy targets.
- **RoboServer** records and reports live input and output data with cloud-based platforms, supporting EPA/ASRS compliances and monetising carbon credits.
- Option for onsite fermentation and fertiliser production

“With RoboServer, environmental stewardship and economic viability go hand in hand, driving sustainable practices and fostering a greener future.“

AI in Carbon Credits Auditing

RoboServer – Process overview

- waste foods in sorted bins are automatically loaded via an elevation lift.
- Solids are filtered and automatically fed into the crushing bin for grinding through a screw feeder.
- residual slag after grinding is directed to drying auger and discharged into the designated collection bin.

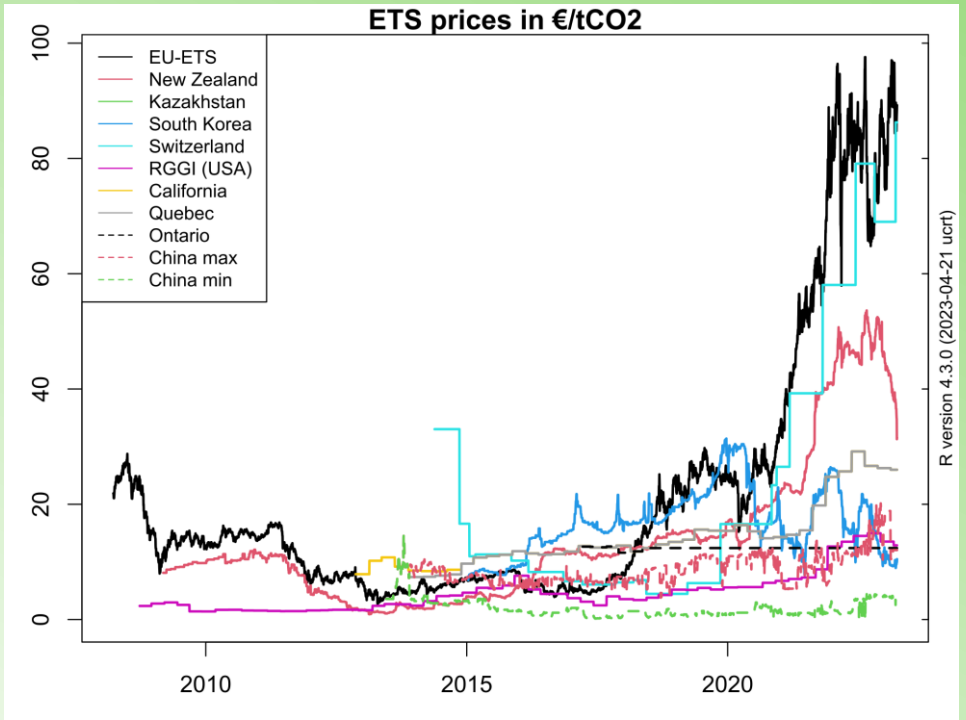


- Phase sequence protection, overload and overheat protection.
- Forward and reverse function, automatic cleaning, and one-button start function.
- Equipped with anti-shock and sound insulation measures for enhanced safety, OHS and compliance
- Safety cage around bin elevator

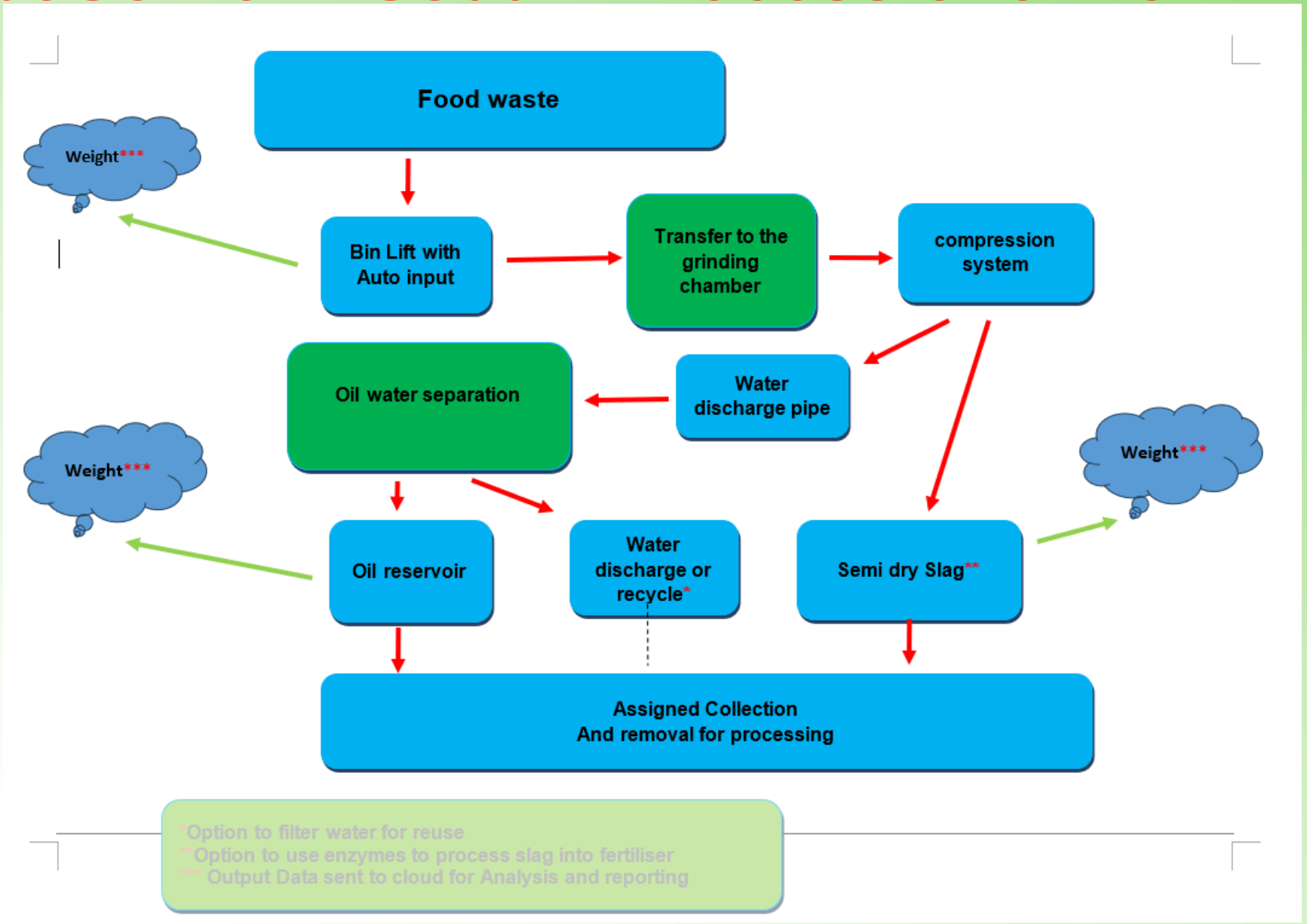
- The water residue is suitable for sewer discharge, meeting tertiary discharge standards
- With additional filtering, discharge can be re-used by the equipment for processing and cleaning

RoboServer - Revolutionising Food Waste Management

- EPA Compliance for circular economy goals
- Reduce food waste Transport costs by over 50%
- Claim Carbon Credits – 1T of food waste = 2T CC
- Promote sustainable and circular economy
- EGS and ASRS Compliance
- Ideal for large shopping centres, food courts, commercial buildings, food processing stations, residential estates, industrial manufacturing, Hospitals, Aged care, Canteens etc



RoboServer RS800 – Process overview



RoboServer: Recycling Equipment

- RoboServer uses IoT devices and AI Data analysis for recording and reporting the processes seamlessly.
- Optimises resources for a circular economy and ESG compliance
- Allows organisations to monetise carbon credits
- Reinforcing commitment to environmental stewardship while simultaneously fostering a circular economy.
- Solution for kitchen rooms, restaurants, supermarkets, food warehouses, retail, canteens, medical and residential complexes
- Allows organisations and institutions to comply with EPA guidelines and claim financial credits and rebates

RoboServer: Live Data Telemetry

Example Data screen shot

Monitor Console Display - sample

Sample Smartphone Data APP

IOT Control Center

Food Recycling – RS350

(Solid, oil, water separation)

Product Name: Intelligent Food Waste Processor

Capacity: 350 (kg/h)

Size: 101×69×105(cm)

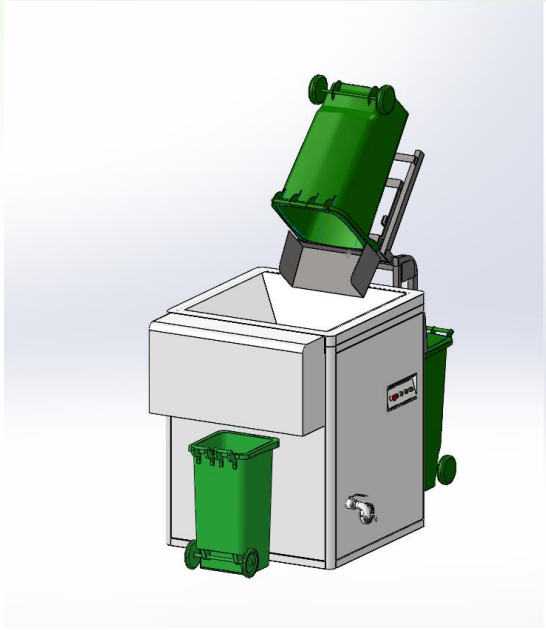
Rated power: 2400W with heating
700W in the unheated state.

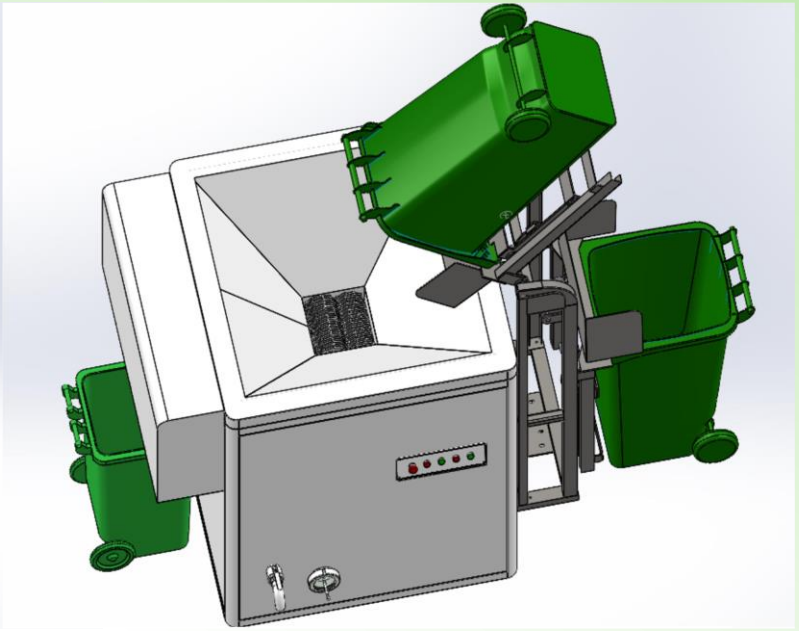
Oil-water separation rate: 95% Features:

- Automatic spray hopper, safety protective mesh cover, anti-jamming reverse grinder, no buffer screw-press dry and wet separator.
- Oil-water separator (with vibration probe + oil layer constant temperature double heating pipe + large oil pump + two sets of through-flow hot air fans)
- Grease automatic weighing, with stainless steel oil drum and stainless-steel rod plate, with waterproof function button and display, real-time transmission of grease collection data.

Food Recycling – RS600

(Solid , oil, water separation)





Spec. + Key Functions

- **Model Size :** 2040mm L*1300mm W*1750mm H
- Model Weight : 400KG
- **Bin size :** 120L
- Processing Capacity : 400-600kg/Hour
- Automatic feeding and crushing, Hydrate,
- Oil, water and solid separation
- It consists of crushing and grinding
- Distribution box
- Cleaning systems
- User APK with cloud Integration for live big data acquisition(input weight, oil weight, remaining material weight)
- Reports for monetising carbon credit

Food Recycling – RS800

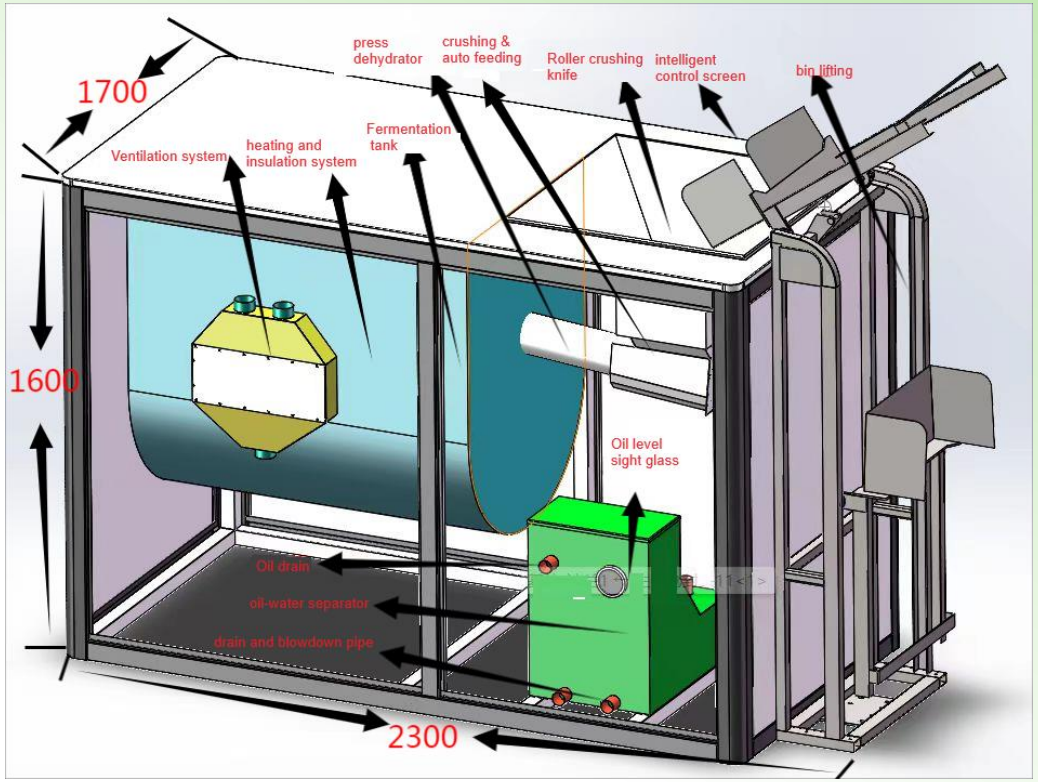
(Solid, oil, water separation)

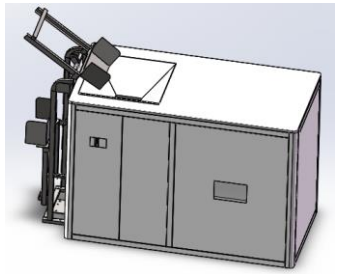
Spec. + Key Functions

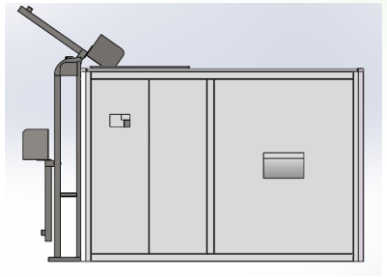
- **Size :** 2060mm L*800mm W*1450mm H
- **Weight :** 430kg + Lift weight : 150kg +cage
- **Lift size :** 2600mm H
- **Processing Capacity :** 800kg/Hour or 6Ton/day
- **Total power during operation:** 9.27KW (3 phase)
  - Spiral feeder 400W, Crusher 4KW, Hydrator 750W,
  - Oil water separator & electric heating: 4KW,
  - Elevator motor 1.5KW.
- Auto Bin Lifting, Auto feeding and crushing,
- Oil, water and solid separation
- User APK with cloud Integration for live data acquisition (input weight, oil weight, remaining material weight) and reporting
- Reports for monetising carbon credits

Food Recycling – RSF800

(Solid , oil, water separation + biochemical fermentation







Specs and Key Functions

- **Size :** 3200L*1200W*1750mm H
- **Processing :** 400Kg/h
- **Power:** – Max 9KW – 3 Phase
- **Fertiliser Capacity :** Output 200kg/Day
- Auto Lifting, sorting ,crushing, dehydration ,stirring, heating, deodorization, aerobic fermentation and degradation,
- Oil, water and dry solid separation
- Biochemical fermentation system for fertiliser use
- Cleaning and exhaust gas treatment systems
- Aerobic fermentation time : 24hours
- The organic matter degradation rate can reach more than 90%
- User APK with cloud Integration for live big data acquisition(input weight, oil weight, output weight
- Reports for monetising carbon credit

RSF400 Bio-Fermentation System

Technical principles

Food waste from Kitchen,Catering

Input

Melon,fruit, vetable & food waste from kitchen

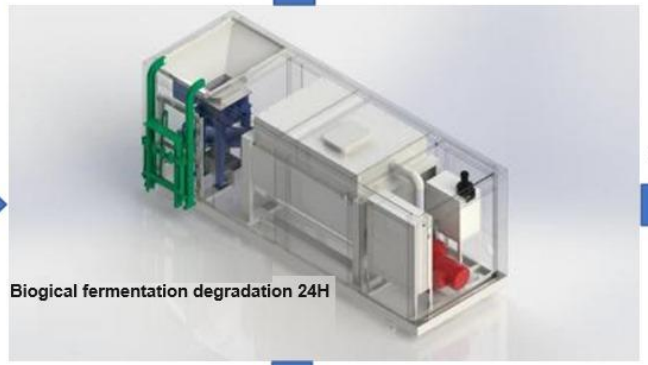
Input

Other organic waste, perishable waste

Input

H_2O , N_2 etc

Output



Output

Industrial Bio-oil

Output

10% organic fertilizer

Organic cultivation

Bacteria

Virus

swill-cooked dirty oil

flies mosquitoes

Processing Capacity Options

- **Processing Capacity:** 350Kg upto 1200kg per hour, achieving significant reduction of kitchen waste volume and oil-water residue
- Onsite Fermentation – standalone or integrated
- Volume reduction rate of between 65-85%
- Reduce food waste removal costs by 50%
- Remove EPA Section 88 Waste Levy fees ($163.20/T) by eliminating landfills - zero Council Levy

“RoboServer waste food recycling equipment offers a sustainable solution for managing organic wastes while adhering to environmental compliances and circular economy principles”

RoboServer - Videos

RSFW700 Demo

RSFW350 Demo

RSFW200 Demo

https://roboserver.com.au/food-recycling-robot

https://roboserver.com.au/equipment-rebates

RoboServer - for sustainable business

- efficient food waste processing technology with datafication
- zero wastes to landfills
- zero Council Levy - currently charged at $163.20 per ton
- reduce waste removal and transportation costs by over 50%
- reduce carbon footprints for organisations.
- monetisation strategies for bio-fuels, animal feed and fertiliser.
- carbon credits per machine / site
- monitoring and reporting for corporate compliances and governance
- AI based data recording and analysis for corporate ASRS and EGS compliance

RoboServer – Deliverables based on Australian market

Assumptions: based on 20Tons of Food wastes per Month

Current Cost Savings:

Council levy @ $163.20Ton x 20Ton = $3,264 per month

Transportation Cost say 50% = $4,500 per month

(Assume $450 per Ton x 20 = $ 9,020)

Potential Savings per 20Tons = $ 7,764per month or **$ 93,168 per year**

Potential Carbon Credits on 40T @$30 per Ton = $1,200per month

Sale of recovered Bio-Oils @5% =1,000Kg @$1/L **= $1,000 per month**

Based on 20Tons of food waste processed per month

Total potential financial savings = **$9,964 per month / $ 119,568 per annum**

Resale/Reuse of Organic Fertiliser = TBA

NSW EPA - Bin Trim Equipment Rebates Program

Rebates of up to $50,000 covering up to 50% of the capital cost of small-scale and on-site recycling equipment or technology.

We owe a better planet for our future generations

Food waste is one of the most under-recycled waste streams, commonly going into general waste instead of being recovered as a rich resource.

RoboServer food waste processing solution offers:

- Reduce transportation **costs by upto over 75%** by removing wet, heavy organic matter from general waste bins
- Eliminate food wastes – Zero ending up in landfills
- Contributes towards production of high quality composts, soil conditioners that can be used for land rehabilitation and soil improvement
- EPA Compliances, sustainability, promotes circular economy
- Accumulates carbon credits

Our Environment : Our responsibility

RoboServer Corporation

Raj Sharma - CEO

Tel: (+61) 0481 839 769

e: sharma@roboserver.com.au