



SAT

Saga Asuka Technology

Improving
Community
Wellbeing
Through
Innovation





“What
could
the new
landfill

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“ORANGE
is the new
Green.”



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A photograph of a beach at sunset. The sun is low on the horizon, creating a warm, golden glow. The sand is dark and wet, with several footprints visible. A dark, silhouetted headland is in the background. The text "Leave an impression, not a footprint." is overlaid in white, serif font. A vertical white line is to the left of the text.

“Leave an
impression,
not a footprint.”

Our Company

Eco Friendly ideas are the way forward in solving our communities growing environmental problems.

Saga Asuka Technology takes pride in how it strives to improve community wellbeing through innovation.

Mission

To protect the environment and benefit the communities where we live, work and play, using Eco-friendly solutions.

Vision

To ensure a clean, healthy and sustainable world through collaborating and nurturing partnerships with others.

The Growing Problem


With the growing world population and our modern lifestyle choices, waste management is becoming extremely difficult to manage and is directly linked to the environmental impact.

Currently, majority of our waste ends up at landfill sites which are now becoming saturated. To escalate the problem, each year we add a further 2 billion tons to these sites.

The conventional methods of disposing waste through landfills have numerous **ENVIRONMENTAL** and **OPERATIONAL** drawbacks:

Environmental:

- Landfill waste releases amongst other gases, both Carbon Monoxide and Methane gas. These emissions are directly causing an adverse impact on our environment. These greenhouse gases are poisons and highly flammable and are giving rise to global warming as a result causing droughts, impact on weather, rising sea temperature and sea levels, etc.
- Plastic waste takes more than 100 years to breakdown.
- Oceans & our waterways becoming polluted with illegal dumping.
- Open ground waste burning is polluting the air and has high CO₂ emissions
- Spread of diseases from illegal landfill sites.
- Leachate polluting our ground water and drinking water.



World Bank Group, 'what a waste 2.0':

“Open dumping is prevalent in low-income countries, where landfills are not yet available. About 93% of waste is burned or dumped on open ground and waterways in low-income countries..”

Operational and Costs:

- Globally, \$205 Billion spent on solid waste management in 2019. This is projected to increase to \$375 Billion by 2025 - Where most of the cost will be borne by developing countries.
- Landfills are costly to sustain and need to be maintained for a further 30 years after closure.
- High costs related to transporting waste to the landfill sites. Existing landfills.
- Existing landfills are slowly becoming saturated and are expected to reach maximum saturation within 10-20 years.
- Running out of available land for landfill sites. New land will have to be made available which could be otherwise used for better use.
- Landfill sites are designed to store waste for an extremely long period rather than disposing it.

The Solution is the Senkou

“Taking affirmative steps today for a cleaner environment tomorrow.”

The Senkou

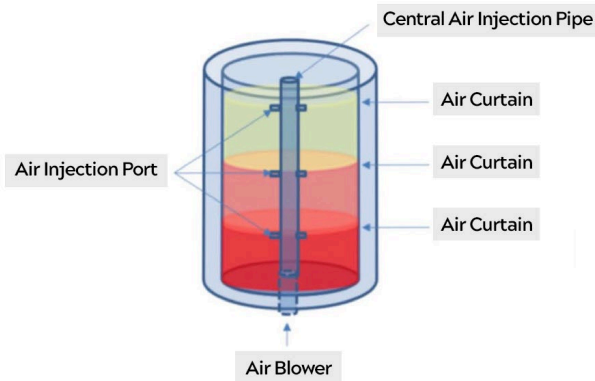
The Senkou presents a complete green waste management solution. It offers an eco-friendly answer for the safe disposal of our waste, which is both cost efficient and self sustainable.

It disposes waste by using an innovative method of ‘Flash Pyrolysis Combustion’. This completely incinerates all waste except glass and metal, and reduces it to ash at a high temperature whilst not emitting any smoke or malodorous.



The Technology

“The Senkou uses a patented system.”



Patented System

The Senkou uses a patented system. The ‘Flash Pyrolysis Combustion’ generates a high temperature (up to 1250°C) within a multi-layer incineration chamber. These multiple layer compartments are formed by generating horizontal air curtains inside the combustion chamber.

Both the smoke and dioxins are trapped and suspended within the

air curtains at high temperature in order to eliminate the smoke and reduce all gaseous emission.

The Senkou is unique as it doesn’t require any form of ‘filtration system’ for the emissions.

The Senkou can operate continuously and does so without the need of any fuel to sustain the combustion, thus saving both time and running costs.

Technical Specifications

Dimension

Length	4550mm
Width	1240mm
Height	2700mm

Weight of Senkou

3.5 tons (3500kg)

Operational Temperature

The Senkou operates within the range of 350°C to 1250°C. Reaches optimal combustion temperature within 15 minutes.

Operating Cost

The Senkou has an extremely low operational cost to power the electronics and fan blower and operates at 400W/ hour, which is an approximate running cost of only \$0.95 per hour.

Compliance and certification

The Senkou has been certified by varying agencies, complying with the most stringent international standards.

Process

Uses 'Flash Pyrolysis Combustion' to completely incinerates waste except glass and metal and reduces it to ash at a high temperature whilst not emitting any smoke or smell.

Capacity

The Senkou can treat a minimum of 10-12 tons of waste per day. It can be operated continuously and only requires to be stopped for the collection and recycling of ash, glass & metal.

Waste Characteristics

The Senkou does not require waste to be separated into categories. It processes all types of waste and reduces it to ash, which can be easily collected at the end of the process for recycling.

Some examples being;

- Organic waste
- High water content waste
- All types of plastics and paper
- Rubber, car tyres and oil
- Oil sludge
- Mixed waste
- General household waste
- Clinical waste
- Industrial and commercial waste

Emissions Breakdown

Cyanide	Not Detected	International min range 1 mg/l
Mercury	Not Detected	International min range 0.005 mg/l
Arsenic	Not Detected	International min range 1.5 mg/l
Dioxin & Furans	0.0332 ngTEQ/Nm ³	International min range 0.1 ngTEQ/Nm ³
Carbon monoxide	26.48 mg/m ³	International min range 50mg/m ³

Key Features and Benefits

Fuelless

Does not require any external fuel to sustain the combustion thus making it self sustaining, saving both time and running costs.

Smokeless and Odourless

The Senkou does not emit any smoke or smell during the process.

Waste Composition

The Senkou processes all types of waste from household, Industrial, commercial and clinical waste, including organic waste, high water content waste, all types of plastics and paper, rubber, oil sludge, car tyres and oil.

All waste is reduced by 99% to non toxic ash which is again reclaimed and recycled.

Low Gas Emissions

The Senkou has the lowest gaseous emissions and more than sufficiently meets the most stringent of international regulations, with 'Dioxin Emissions' between 0.03 and 0.06ng TEQ Nm³. Considerably lower than the required international level of 0.1ng TEQ Nm³, thus offering a much needed 'green solution' to address the ever increasing waste disposal problem.

Ash as a by-product

The Senkou is "eco-friendly". The ash is the only residue, which is the by-product of the process. It is completely non-hazardous and non-toxic and when mixed with compost the ash can be used as a form of soil enhancer and conditioner.

Low running costs

The Senkou has an extremely low operational cost to power the electronics and fan blower at an approximate running cost of only \$0.95 per hour.

Key Features and Benefits

Operational Efficiency

The Senkou is automated and can operate continuously. It only requires to be stopped for the collection and recycling of ash, glass & metal.

Filtration-free system

This system is unique as its filter-free and does not require any form of filtration system for the emissions, saving both time and money.

No Sorting or Pretreatment of waste

The waste does not require to be tiresomely separated or pre-treated before incineration, both saving time and money.

Low Maintenance

The Senkou requires little maintenance and saves on downtime. The combustion chamber is self cleaning and the ash is collected into the ash chamber which needs to be emptied out periodically.

Low transportation costs

Saves money on high transportation costs in both gathering and moving the waste to the landfill sites.

Operational Ease

Only one personnel is needed to operate the Senkou, requiring basic training and supervision for operation.

Set-up Convenience

Due to the size, the Senkou can be easily mobilised across various locations & terrains and can be ready to use within 4-6 hours.

Salvage Landfill Sites

Large volume of waste no longer needs to end up in our landfill sites.

“The Senkou is Eco-friendly and produces zero secondary contamination.”


The Senkou is our little way of giving something back to our planet to assist in a brighter future.

It offers an Eco-friendly solution for the safe disposal of our waste. The combustion process is both smokeless and odorless.

The Senkou more than sufficiently meets the international standard of ‘Dioxin Emissions’ of 0.1ng TEQ Nm³, and therefore offers a much needed ‘green solution’ to address the ever increasing waste disposal problem.

The Senkou gives the complete green solution to waste management. It effortlessly disposes of the waste through combustion and produces non-toxic ash as a by-product. The Ash has the following uses; soil conditioner when mixed with compost, construction of bricks & concrete blocks, base layer in road construction and many other uses.

The Senkou is Eco-friendly and produces zero secondary contamination.



“Are we ready to hold ourselves accountable for our actions, because that’s the only way we are going to protect our earth?”

The Solution for Landfill

“Each 1000kg of waste reduces to 10kg of Ash.”

Landfill sites are becoming a serious problem worldwide. It's not just the ugly sight of increasing heaps of waste, but also serious concerns relating to toxins, leachate and greenhouse gases.

With Senkou, large volumes of waste no longer need to end up in

our landfill sites.

When incinerated, the waste volume reduces down to just 1% non-hazardous ash, which is recycled and used in various industries.

“Each 1000kg of waste reduces to 10kg of Ash”.

Affordable Waste Management

“Reduces the overall waste management cost by adopting a decentralised system.”

The senkou reduces the overall waste management cost by adopting a decentralised system.

In a decentralised system, multiple Senkou units are deployed at various key locations in order to address the waste issues at source.

Hence, waste collected is no longer required to be transported over large distances to sorting depots and then further transported to landfill sites,

saving on both CO₂ emissions, transportation costs and tipping fees. This makes waste management extremely cost effective and eco-friendly.

A decentralised system also saves on the cost of land and the huge ongoing maintenance costs related to landfill sites.

The non-toxic ash by-product presents an opportunity to generate revenue by selling it to various industries including agricultural and construction.

User Friendly and Minimal Maintenance

“The Senkou is a fully automated waste management system.”

The Senkou can be installed and commissioned within 4-6 hours.

The Senkou requires minimal maintenance. Its combustion chamber is self cleansing and it's filter-less thus eliminating the need for maintenance.

The senkou is easy to operate and only requires a single operator per shift. All training is provided by Saga Asuka Technology.

The Senkou is a fully automated waste management system.

Self Sustainable - No Fuel required

**“Approximate running cost
of only \$0.95 per hour.”**

The waste disposal costs are constantly rising proportionally to the rising fuel prices. The Senkou addresses this by not requiring any fuel to sustain

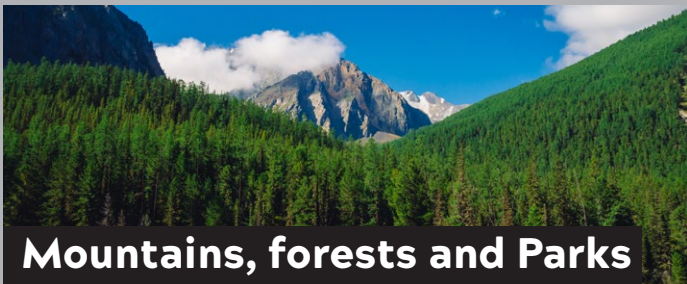
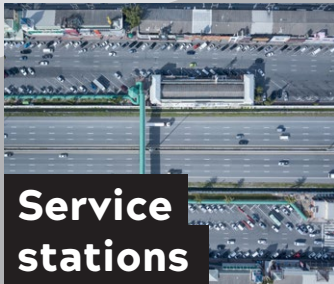
the combustion thus making it self-sustaining.

The Senkou has an extremely low operational cost to power the electronics and fan blower at an approximate running cost of only \$0.95 per hour.

Where can the Senkou help?



Where can the Senkou help?





SAT

Saga Asuka Technology

SAGA ASUKA TECHNOLOGY SDN. BHD

(1344056-K)

Office 27-2
Menara One Mont Kiara
Jalan Kiara, Mont Kiara
50480 Kuala Lumpur, Malaysia

T +60 3 6419 9799
E info@sagaasukatech.com
W www.sagaasukatech.com