SINCE 1919

NIKKO

ASPHALT MIXING PLANT

NIKKO – Asia's Leading Asphalt Mixing Plant Manufacturer

Reliable, High-Quality Products Engineered in Japan for ASEAN

ASPHALT MIXING PLANT
NAP•ACE-SERIES

RECYCLING UNIT
NRU•TOPα-SERIES

NIKKO

NIKKO CO., LTD.

https://www.nikko-net.com/en/

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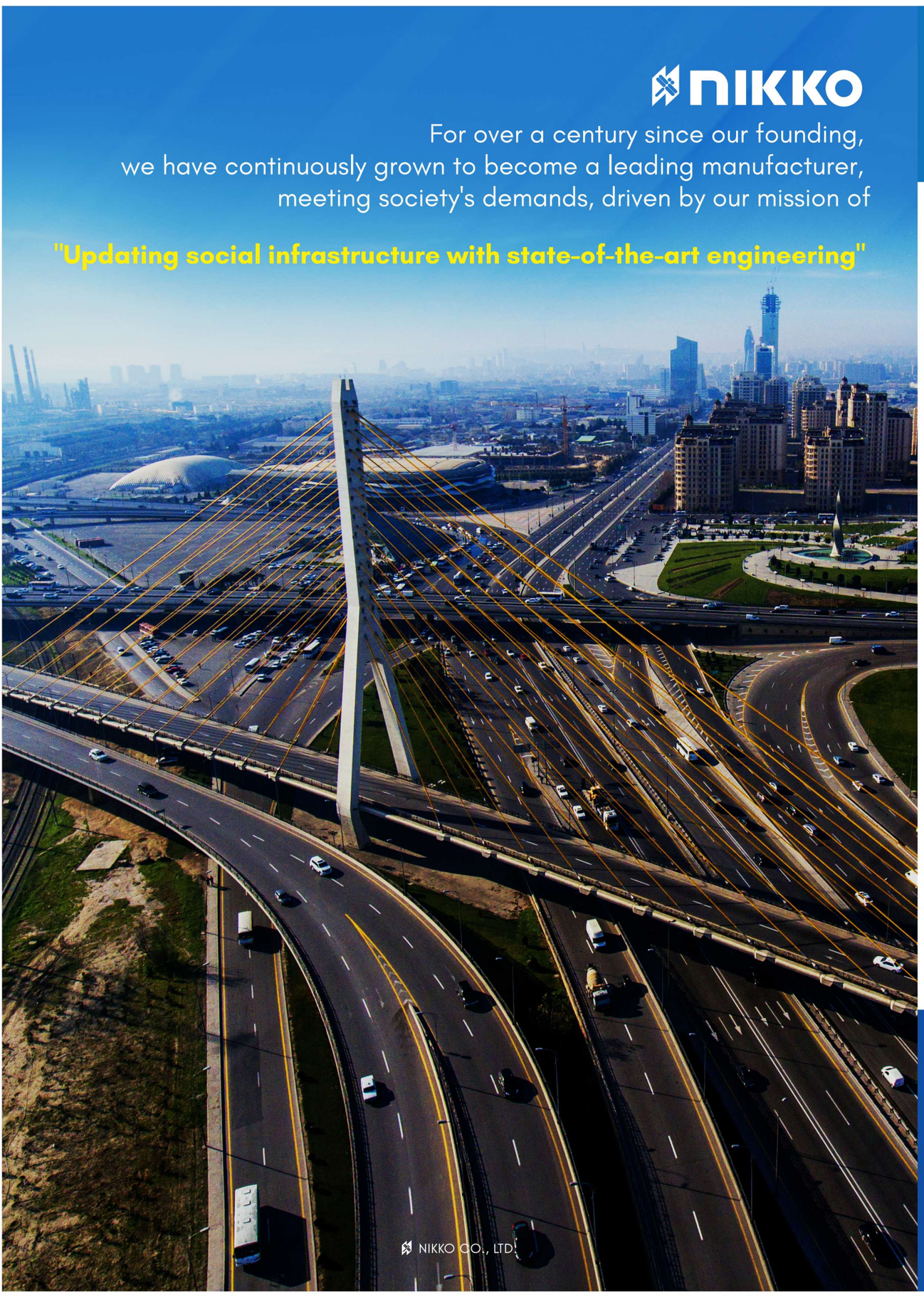
NIKKO

For over a century since our founding,
we have continuously grown to become a leading manufacturer,
meeting society's demands, driven by our mission of

"Updating social infrastructure with state-of-the-art engineering"



NIKKO

Japan's No.1 Selling Asphalt Mixing Plant

80% Market Share in Stationary Asphalt Mixing Plant

NIKKO CO., LTD. Headquarters

1013-1, Eigashima, Okubo-cho, Akashi-shi, Hyogo, 674-8585 Japan

NIKKO "Provide high-quality, reliable products and services engineered in Japan to ASEAN"

■ Founding (1919-1945)

1919 • NIPPON TOOL MFG. CO., LTD. was founded after World War I to produce and sell farming tools like shovels and scoop, supporting Japan's economic recovery.

■ Business Expansion (1946-1960)

1956 • Began ready-mixed concrete plant production.

1958 • Started asphalt mixing plant production, entering the construction machinery sector.

■ Becoming a Full-Fledged Machinery Manufacturer (1961-1984)

1964 • Constructed a large factory in Eigashima and relocated the head office.

1968 • Our company was renamed NIKKO CO., LTD. as we developed our production of construction machinery, such as asphalt mixing plants (since 1958) and belt conveyors (since 1966).

■ Environmental Focus & China Market Entry (1985-2011)

1977 • Developed recycling plants for Reclaimed Asphalt Pavement (RAP).

2001 • Established the Environmental Division and innovated eco-friendly plants.

• Expanded into the Chinese market by founding NIKKO (SHANGHAI) CONSTRUCTION MACHINERY CO., LTD.

■ Asian Expansion : Establishment of Nikko Asia & GMT (2012-Now)

2020 • NIKKO ASIA (THAILAND) CO., LTD. or NAT was established for regional plant, parts, and maintenance services.

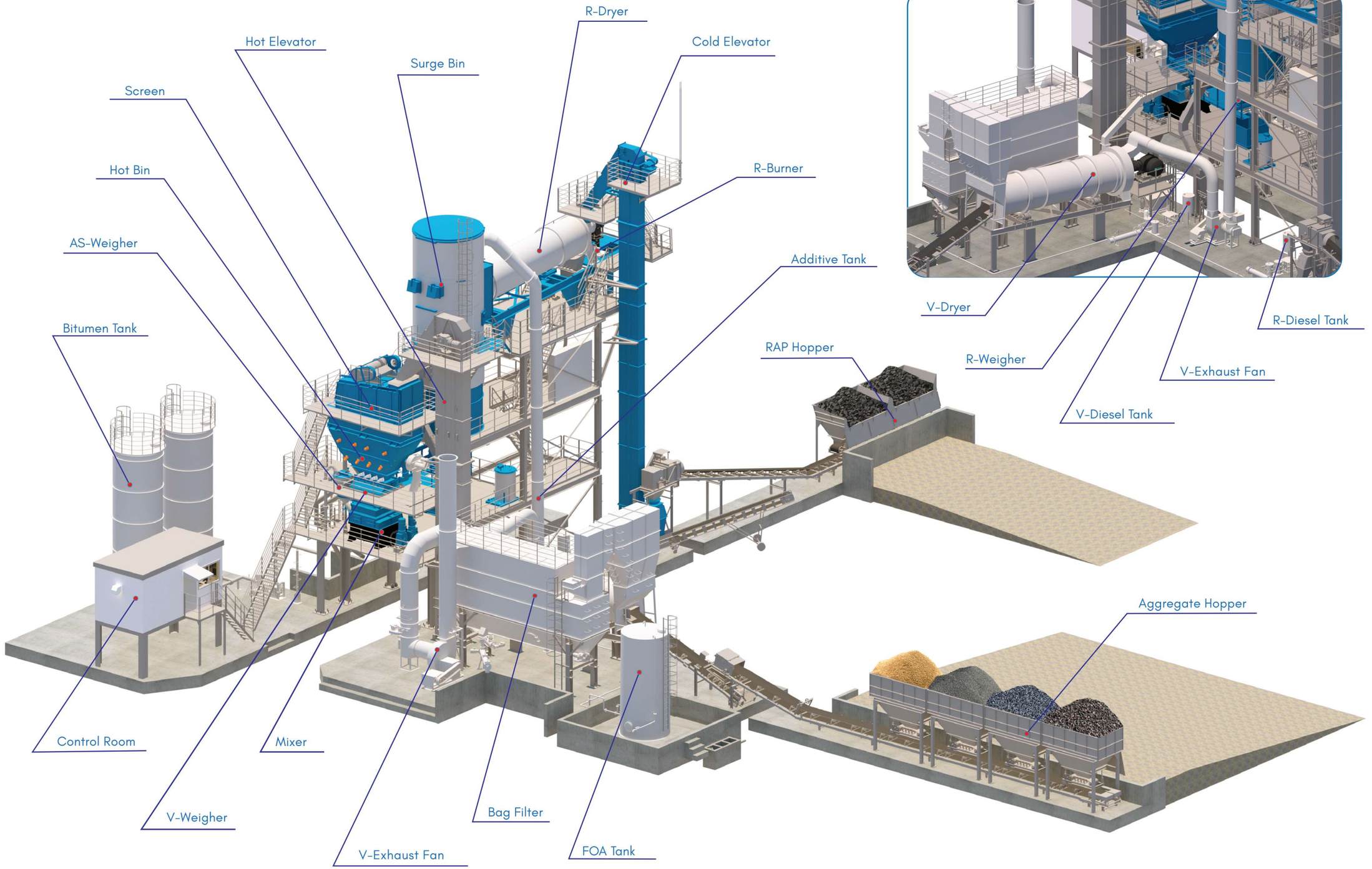
• NIKKO GLOBAL MANUFACTURING (THAILAND) CO., LTD. or GMT was established as a production base for high-quality asphalt plants in Southeast Asia.

Company Motto

- Serve society through business
- Work toward prosperity with sincerity and responsibility
- Produce appropriate profits through original ideas and improvement efforts

Asphalt Mixing Plant : NAP・ACE-SERIES

Recycling : NRU・TOPα-SERIES

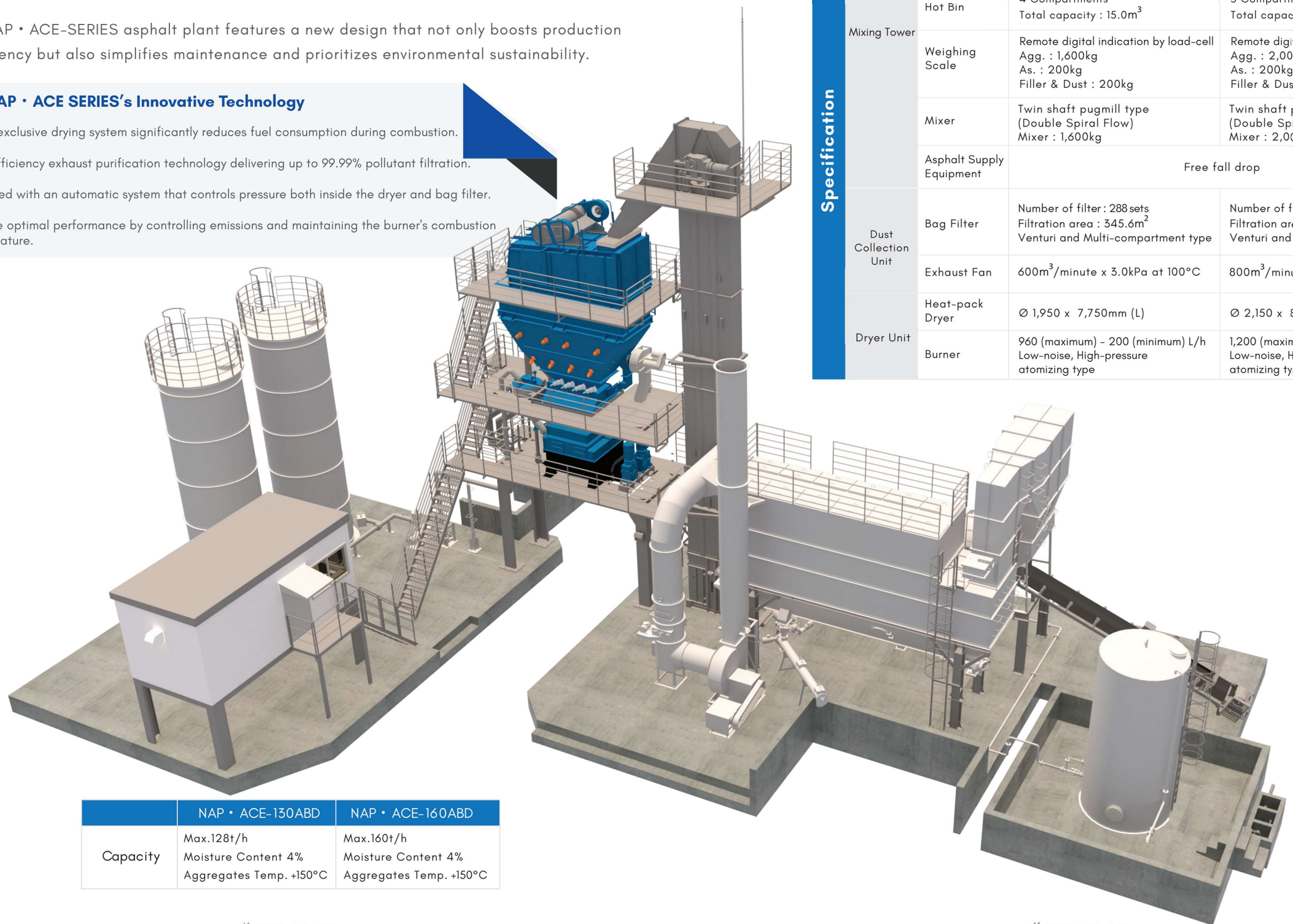


Asphalt Mixing Plant
NAP • ACE-SERIES

NAP • ACE-SERIES asphalt plant features a new design that not only boosts production efficiency but also simplifies maintenance and prioritizes environmental sustainability.

NAP • ACE SERIES's Innovative Technology

- NIKKO-exclusive drying system significantly reduces fuel consumption during combustion.
- High-efficiency exhaust purification technology delivering up to 99.99% pollutant filtration.
- Equipped with an automatic system that controls pressure both inside the dryer and bag filter.
- Achieve optimal performance by controlling emissions and maintaining the burner's combustion temperature.

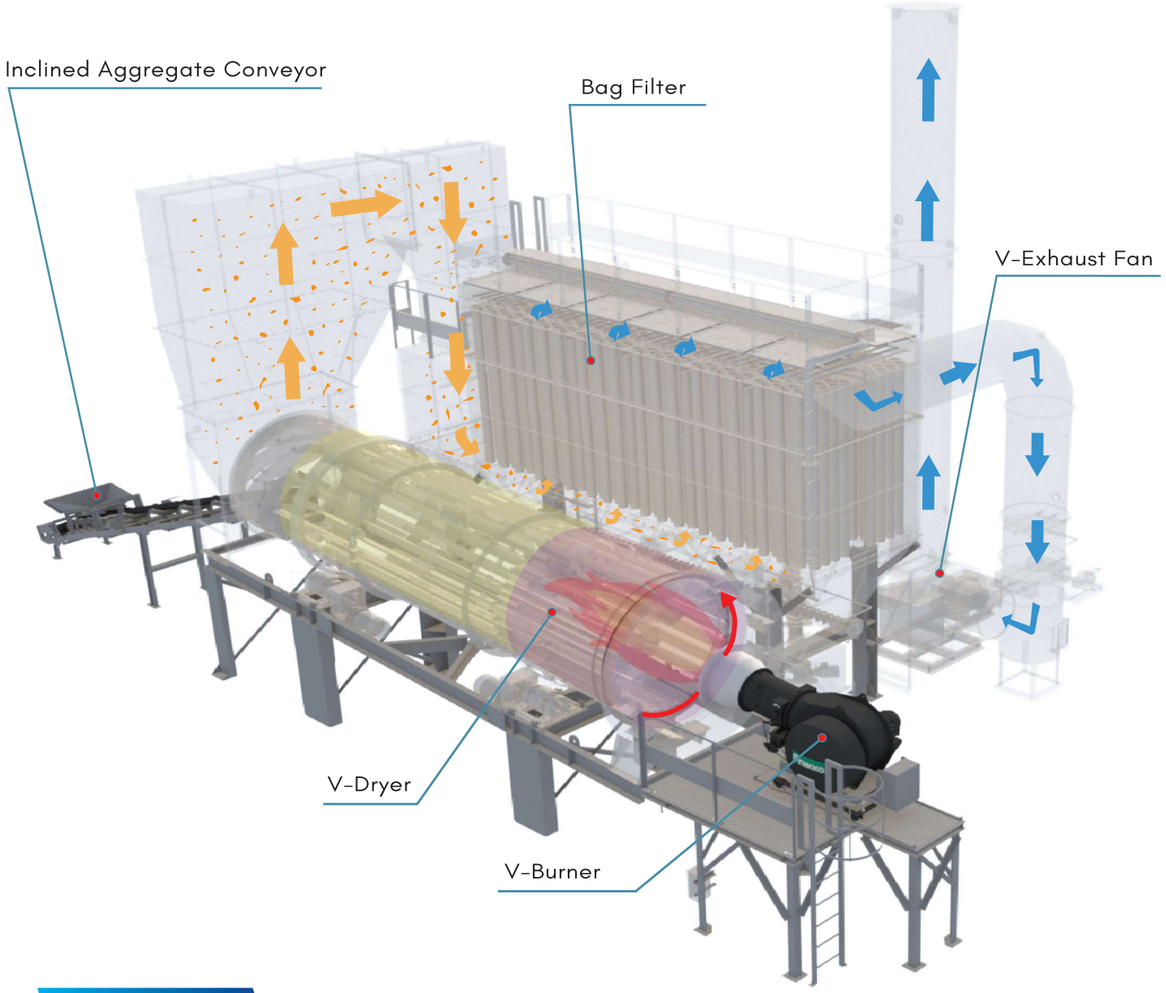


	NAP • ACE-130ABD	NAP • ACE-160ABD
Capacity	Max.128t/h Moisture Content 4% Aggregates Temp. +150°C	Max.160t/h Moisture Content 4% Aggregates Temp. +150°C

Specification	Unit		NAP • ACE-130ABD	NAP • ACE-160ABD
	Mixing Tower	Hot Elevator	Vertical induction	
		Screen	Low-head gearless type max.128t/h	Vibration moter type max.160t/h
		Hot Bin	4 Compartments Total capacity : 15.0m^3	5 Compartments Total capacity : 19.0m^3
		Weighing Scale	Remote digital indication by load-cell Agg. : 1,600kg As. : 200kg Filler & Dust : 200kg	Remote digital indication by load-cell Agg. : 2,000kg As. : 200kg Filler & Dust : 300kg
		Mixer	Twin shaft pugmill type (Double Spiral Flow) Mixer : 1,600kg	Twin shaft pugmill type (Double Spiral Flow) Mixer : 2,000kg
		Asphalt Supply Equipment	Free fall drop	
	Dust Collection Unit	Bag Filter	Number of filter : 288 sets Filtration area : 345.6m^2 Venturi and Multi-compartment type	Number of filter : 384 sets Filtration area : 460.8m^2 Venturi and Multi-compartment type
		Exhaust Fan	600m^3/minute x 3.0kPa at 100°C	800m^3/minute x 3.2kPa at 100°C
	Dryer Unit	Heat-pack Dryer	Ø 1,950 x 7,750mm (L)	Ø 2,150 x 8,500mm (L)
		Burner	960 (maximum) - 200 (minimum) L/h Low-noise, High-pressure atomizing type	1,200 (maximum) - 240 (minimum) L/h Low-noise, High-pressure atomizing type

NIKKO CO., LTD.

Drying Technology

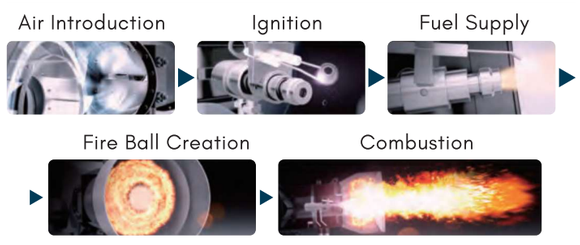


Burner

Elevate your heating and drying processes with NIKKO's NTB-BURNER. Its high-pressure system ensures enhanced, soot-free combustion, using less fuel and air for maximum energy efficiency, reduced pollution, and stable temperature control.

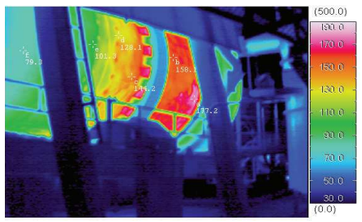
NTB-BURNER

How It Works



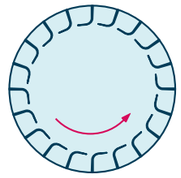
Dryer

NIKKO's dryers feature optimized flights and angles for efficient heat transfer from the burner to the hot air, evenly distributing it throughout the aggregate. This saves energy, reduces fuel consumption, and effectively removes moisture. Additionally, our dryers use internal heat retention technology instead of external insulation for faster cool-down, significantly reducing cooling load and boosting overall system efficiency.



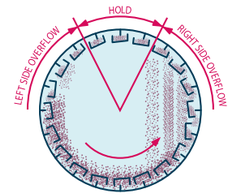
Heat Transfer Zone

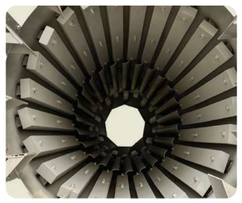
This zone efficiently reduces aggregate moisture by uniformly spreading the aggregate as it's lifted and dropped like a veil, thereby maximizing its exposure to hot air and leading to highly effective heat exchange.



Temperature Rising Zone

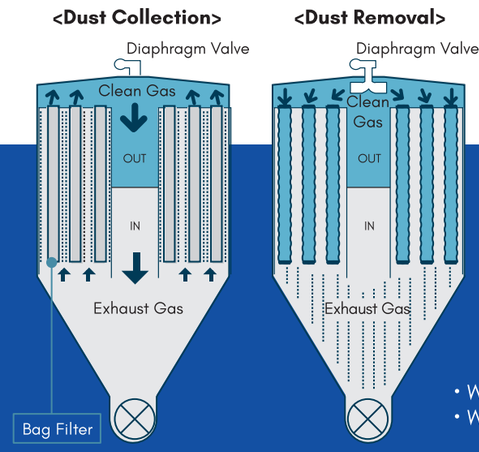
NIKKO's basket flights effectively prevent direct contact between the aggregate and the burner flame. This design allows the aggregate to act as an insulator, maintaining optimal temperature during moisture removal and significantly boosting heat transfer efficiency by over 80%.





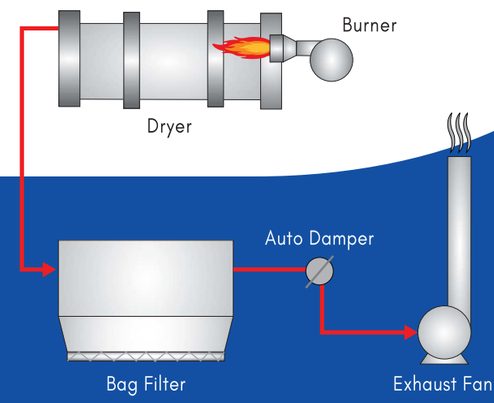
Exhaust Gas Treatment System

Our Bag Filter system features high-performance filter bags, achieving up to 99.99% dust filtration. This significantly reduces dust emissions from 5.0 g/Nm^3 to just 0.1 - 0.001 g/Nm^3.
With an integrated Pulse Jet system, it actively cleans the bags, supporting your commitment to environmental responsibility.



Static Pressure Control System

Our Static Pressure Control system precisely adjusts dryer exhaust gas for optimal balance, helping to reduce fuel consumption and boosting energy efficiency.



- When internal pressure is high, the damper opens to release gas.
- When internal pressure is low, the damper closes to maintain gas temperature.

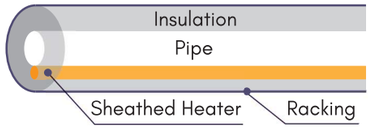
Asphalt System

Our vertical bitumen storage tanks are engineered for energy efficiency. They're equipped with advanced temperature control sensors that precisely maintain preset temperature while using optimal heater power. This significantly reduces electricity consumption and lowers operating costs.

Dual Convection Tank

> Partition Plate Benefits
⇒ Boosts the tank's thermal performance
⇒ Reduces internal temperature differences

Heater Technology



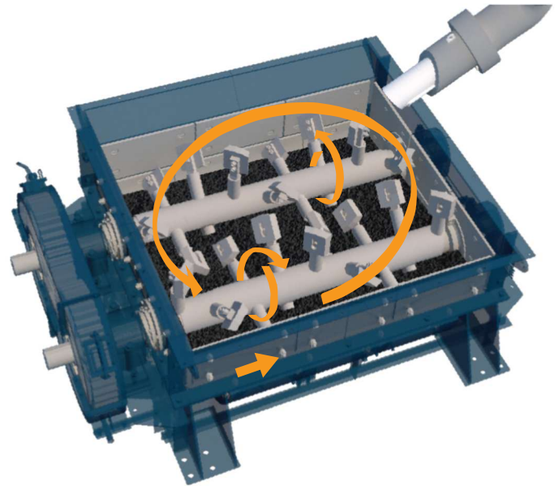
⇒ **Sheathed heaters for Pipes** : Highly resistant to vibration and impact, offering a long operational life. They also provide rapid temperature response, consistently maintaining optimal pipe heat.

⇒ **Insulation & Jacketing** : Our insulation and aluminum jacketing delivers corrosion-resistant, lightweight, and low-maintenance performance.

⇒ **Thermistor** : Provides optimal temperature management for even heat delivery in pipes, boosting efficiency and reducing energy costs.

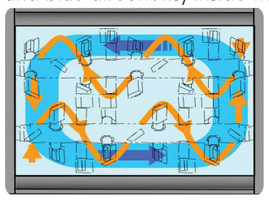
Mixing Technology

Achieving fast, uniform asphalt mixtures is crucial for quality. Nikko's twin-shaft mixing system features uniquely designed 45-degree angled paddles combined with high-speed rotation, ensuring a quick and homogeneous blend. This innovative design not only saves time and electricity but also significantly reduces wear on the mixing paddles.



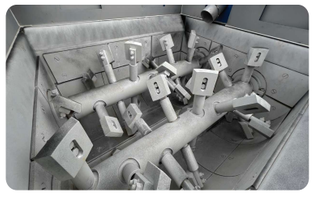
Double Spiral flow

Our Double Spiral Flow system rapidly achieves homogeneous material blends by moving materials in two distinct patterns (orange and blue directions) inside the mixer.



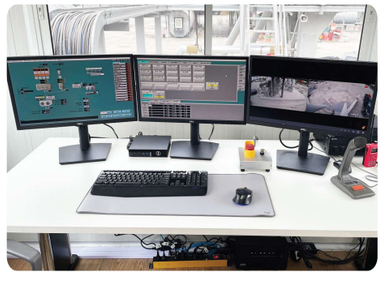
Protector

The mixer's shafts and paddles are equipped with wear-resistant guards to extend lifespan and reduce maintenance costs.



Asphalt Plant Control System "Next Duo"

The Next-Duo system provides essential, fully automated control for your asphalt plant. It manages mixing, temperature, and weighing with high precision, minimizing errors and greatly improving efficiency.



Recycling Unit
NRU • TOPα-SERIES

The NRU TOPα series is engineered for Hot Mix Asphalt Recycling in Plant project, utilizing 20-65% recycled asphalt pavement (RAP).

R-Dryer heating technology uses a parallel-flow system for highly efficient heat transfer, ensuring materials are thoroughly dried without wasting energy. It also features precise combustion temperature control through airflow management, which reduces fuel consumption and improves operational efficiency.

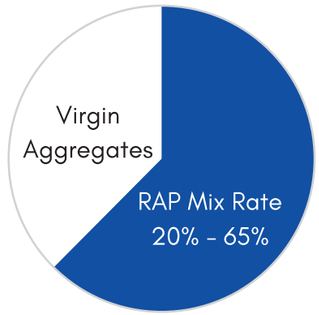
Specification Example (in the case of TOPα45)

Specification			
	R-Dryer Unit	Heat-pack Dryer	45t/h Max. moisture content of aggregate is 3% ∅ 1,800 x 9,000mm (L)
		Burner	400 (maximum) - 100 (minimum) L/h Low-noise, High-pressure atomizing type
	Dust Collection Unit	R-Exhaust Fan	320m^3/minute *R-exhaust gas to dryer (RD)
		Rail Mounted Weighing Scale	Remote digital indication by load-cell Capacity : 1,500kg x 5kg
	R-Tower	Surge Bin	Capacity : 30t for Hot RAP
		Additive Liquid Tank	Capacity : 500L

Nikko has been a pioneer in recycling system development since 1990.

To date, over 500 systems have been installed in Japan and more than 100 systems overseas.

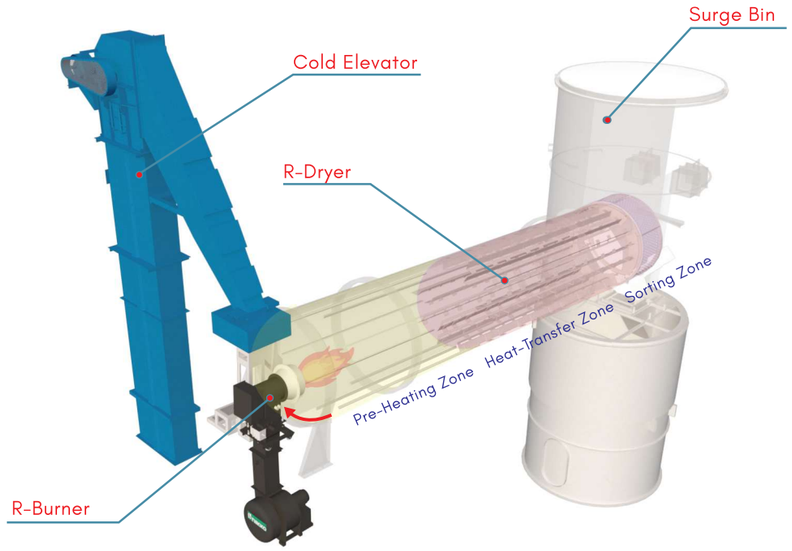
This achievement highlights Nikko's leadership in asphalt recycling technology.



R-Dryer

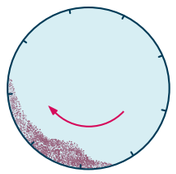
Nikko's R-Dryer continuously evolves for better performance and less environmental impact. This new design removes the combustion chamber, connecting the burner directly to the dryer for faster, more efficient direct hot-air heating at lower combustion temperatures than traditional design, along with automatic temperature control. The result is significant energy savings and consistently dried material, while effectively reducing blue smoke and harmful emissions.

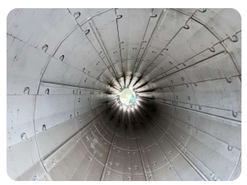
Nikko's innovative internal dryer structure effectively prevents RAP from direct flame contact. This reduces material from sticking to the dryer and slows material flow for thorough heating.



Pre-Heating Zone

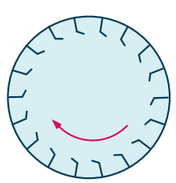
The RAP pre-heating process prevents asphalt from sticking inside the dryer, which could otherwise damage the equipment. Additionally, the dryer features specialized liner plates to protect against abrasion from moving RAP, extending lifespan and reducing maintenance costs.

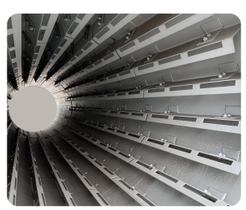




Heat-Transfer Zone

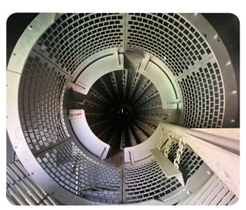
At this zone, RAP is heated by lifting and dropping it as a veil inside the dryer. This allows for thorough heat exchange with hot air, ensuring efficient drying.





Retention and Sorting Zone

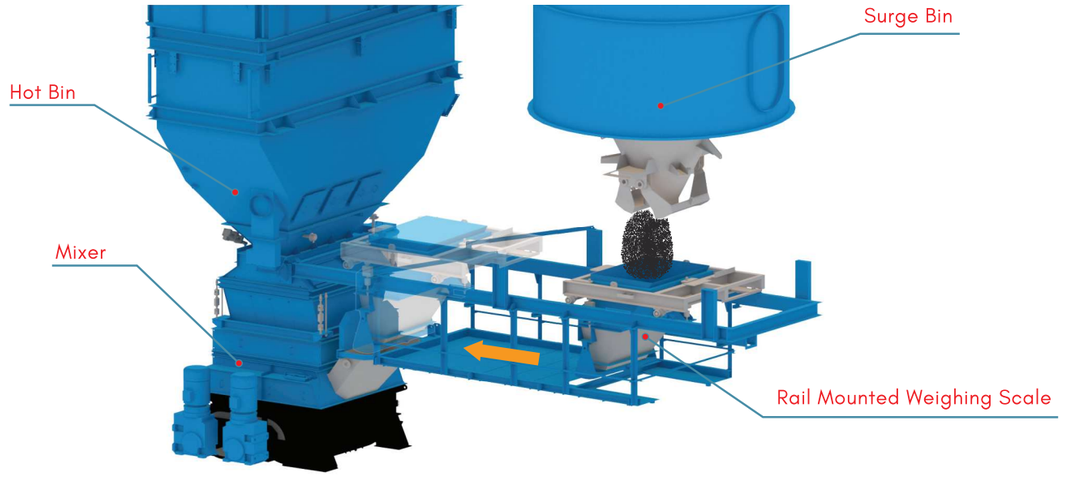
Our design slows RAP material flow, allowing it to remain longer in the dryer for optimal heat exchange and precise material handling. This zone also features a screen for accurate RAP sizing.



RAP Weigher (Moveable) with Conveying System

The Movable RAP Weigher with Conveying System delivers precise, continuous RAP weighing and conveyance, optimizing your production efficiency. Its bucket accurately draws material from the surge bin, weighs it precisely to the NEXT-DUO programmed ratio, and then automatically discharges the RAP into the mixer.

This system boosts production efficiency, simplifies operation through full automation, and minimizes RAP loss during transport. It also ensures optimal quality for discharging and mixing recycled materials in asphalt production.



RD Exhaust Gas Treatment System (R exhaust gas to dryer)

Hot exhaust gases generated during the RAP drying process often contain a significant amount of dust and VOC vapors.
The RD system is designed to:

- Redirect the exhaust gas back to the main dryer (V-Dryer), where the temperature is lower, to reuse excess heat.
- Reduce the inlet temperature to the dust collector, extending the filter bag's lifespan and lowering the risk of fire or explosion.
- Decrease overall energy consumption and improve the operational efficiency of the entire system.