



RKC

Rotary Kiln Combustion

Ruggedness and flexibility in heat treatment, ensuring uniform combustion and maximum volume reduction



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Rotary Kiln Combustion

Rotary combustion system; the primary combustion chamber is considered part of the thermal oxidation process. It is a continuously operating rotary incinerator.



CHEMICAL AND MECHANICAL RESISTANCE

Use refractory material with a high alumina content to ensure resistance to wear and chemical attack from the residue.



PREDICTIVE MAINTENANCE

A thermal imaging camera continuously monitors the external temperature of the rotary kiln, making it possible to detect cracks and damage to the refractory lining and schedule maintenance.



CONTINUOUS, AUTOMATED OPERATION

It features a system that allows for continuous ash discharge during operation, thereby preventing downtime.



UTILIZATION OF BYPRODUCTS

The burned inert material (ash) can be sold to construction companies (as fill material), asphalt producers (as a component of bituminous mix), or cement manufacturers (as an additive).

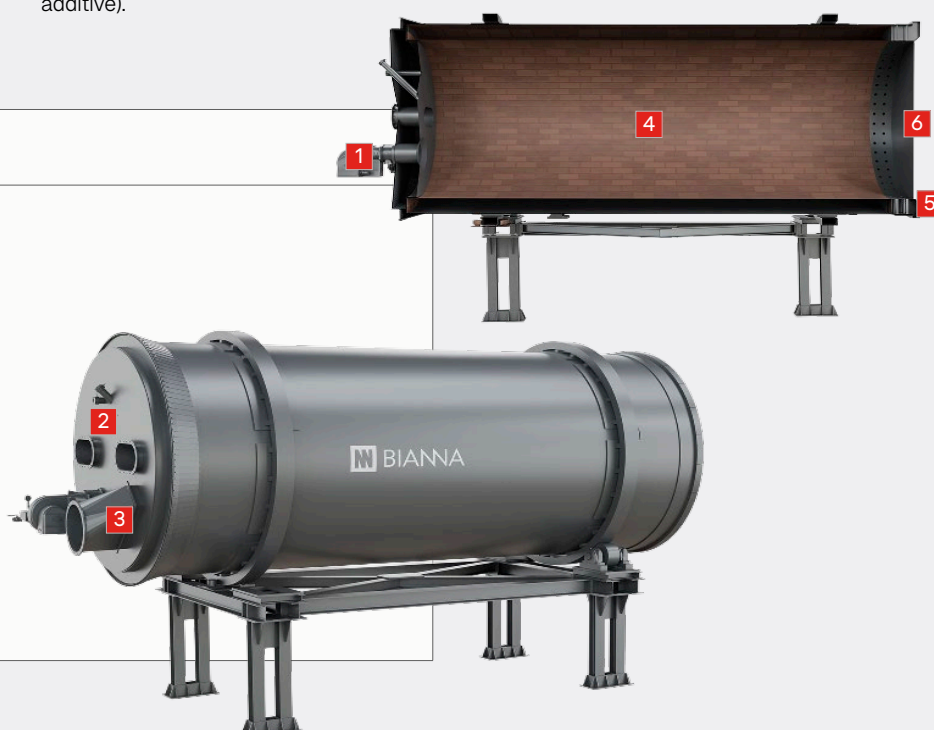


THERMAL EFFICIENCY

It ensures proper distribution of air and material. In addition, the air used to cool the ash-extraction screw can be reused to pre-heat the secondary air.

■ Componentes

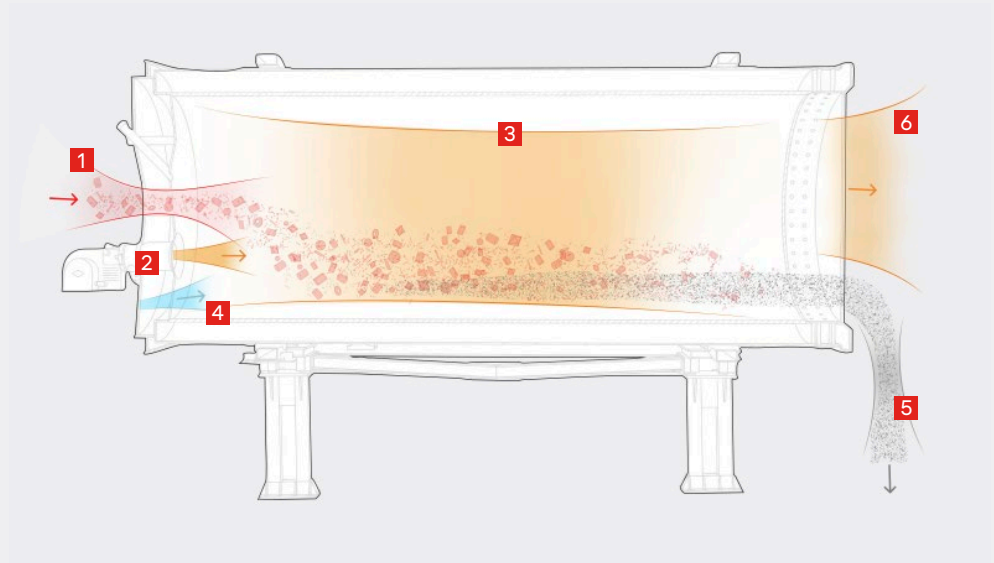
- 1 Auxiliary burner
- 2 Residue feed
- 3 Primary air inlet
- 4 Rotary kiln
- 5 Ash discharge
- 6 Recovery gas outlet



Key Machines

- 1 Material Feed
- 2 Auxiliary Burner
- 3 Rotary Kiln
- 4 Primary Air
- 5 Ash Discharge
- 6 Flue Gas Outlet

- GASES
- MATERIAL
- AIR
- ASH



How It Works

The RKC system operates by continuously rotating a thermal drum, which ensures uniform mixing and combustion of the waste.

Feeding and Turning

Continuous material feed and constant rotation to ensure uniform mixing with the combustion air.

Uniform Combustion

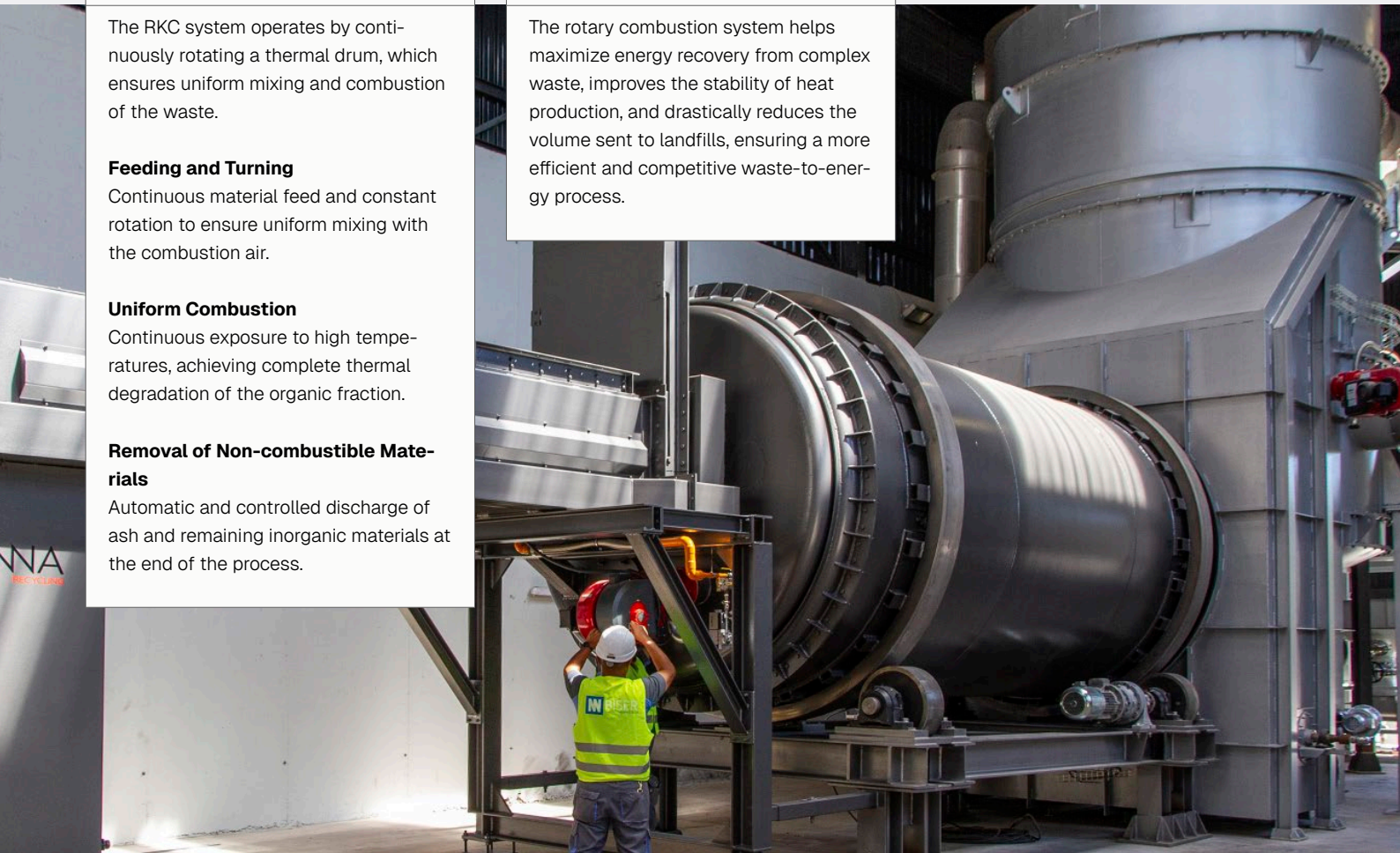
Continuous exposure to high temperatures, achieving complete thermal degradation of the organic fraction.

Removal of Non-combustible Materials

Automatic and controlled discharge of ash and remaining inorganic materials at the end of the process.

Valuation

The rotary combustion system helps maximize energy recovery from complex waste, improves the stability of heat production, and drastically reduces the volume sent to landfills, ensuring a more efficient and competitive waste-to-energy process.



At Bianna, we are a leading multinational company specializing in the engineering, design, manufacturing, and financing of advanced technological solutions for waste management, treatment, and recovery.

With over 40 years of experience and more than 1,100 projects and references worldwide, we transform waste from an environmental liability into an economic asset. We are committed to driving the circular economy and leading the decarbonization of strategic sectors, demonstrating that sustainable waste management will be profitable—or it won't be at all.

Full-service technology provider

We offer “turnkey” technology that integrates 360° solutions within our core technology areas:

Service ecosystem

We have designed a comprehensive ecosystem of services built around our technology, designed exclusively to maximize the return on your investment, ensure the viability of your projects, and guarantee your peace of mind in the long term

Mechanical
and Biological
Treatments

MBT

Equipment and
facilities for
material recovery



Thermo
Value
Solutions

TVS

Thermal processes
for combustion,
drying, and energy
recovery



Bianna
Renting
Services

BRS

Financial flexibility
related to your
operations



Bianna
Green
Ways

BGW

The place
where Bianna
technologies come



Bianna
Aftersales

BAS

Comprehensive
solutions for
optimal operations



Our technology creates real value by reducing our environmental impact and ensuring the sustainability of the planet and people, both inside and outside Bianna.

Smart waste **Profit energy**



■ More information

ROTARY KILN COMBUSTION



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