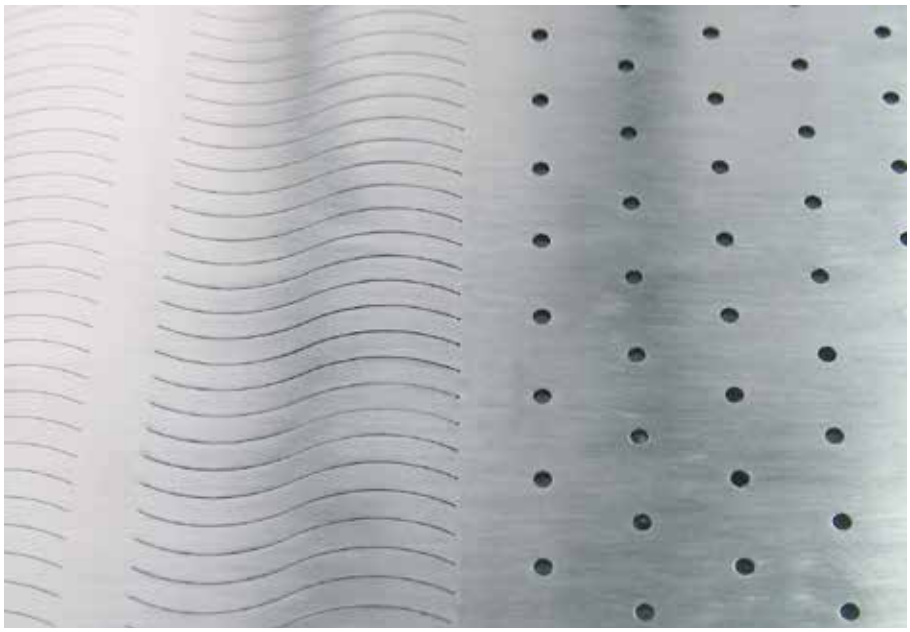
WE
PROCESS
THE
FUTURE

binder+co

DRYON
DRYING AND COOLING WITH OUTSTANDING QUALITY

WE PROCESS THE FUTURE



PROCESSING VALUABLE RESOURCES WITH CARE, EFFICIENCY AND INNOVATIVE SOLUTIONS.

The Binder+Co group's machines and systems are the ideal platform for the efficient preparation and conservation of valuable resources from primary and secondary sources. Founded in 1894 by Ludwig Binder, today Binder+Co is the world leader in processing glass cullet and sorting hard-to-screen bulk materials.

With a portfolio covering six process categories - crushing, screening, wet processing, thermal processing, sensor-based sorting, bagging and palletizing - we offer customers great expertise and an extensive product range from a single source.

Our understanding of the interplay between these process steps enables us to provide high-performance, custom-configured solutions and so decisive economic and technical advantages.

RELIABLE CRUSHING

EFFICIENT SCREENING

WET PROCESSING

THERMAL PROCESSING

SENSOR-BASED SORTING

BAGGING PALLETIZING

With the DRYON, Binder+Co ensures gentle and efficient drying in a wide range of industries. Decades of experience in the thermal treatment of bulk materials of all kinds not only qualify Binder+Co for the construction of customized individual machines, but also make the company a leading supplier of complete systems.

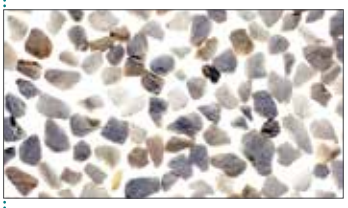
CONSTRUCTION RAW MATERIALS

- Limestone
- Diabase
- Granite
- Marble
- Dolomite
- Greywacke
- Basalt
- Gravel
- Gneiss
- Amphibolite

Drying forms the basis for further processing or refinement of the bulk materials when processing rocks and soils. The DRYON ensures efficient drying and constant quality when drying moist input material. In many cases, the material must be cooled after drying. With DRYON, both process steps can be carried out in a single machine.

INDUSTRIAL MINERALS

- Quartz sand
- Feldspar
- Gypsum
- Limestone
- Clay
- Bentonite
- Lava
- Marble
- Perlite
- Magnesite
- Slate



The DRYON is particularly cost-efficient and energy-saving: The energy-saving principle of heat recovery can be implemented due to a closed circuit between the cooling and drying zones. The quantity of heat contained in the exhaust air of the cooling zone which is withdrawn from the cooled material is recirculated to the drying zone. Therefore, the amount of thermal energy needed for drying is significantly lower than in comparable systems.

WE DRY AND

PLASTICS

- PE/PET Flakes
- PE/PET Pellets

The DRYON ensures that a wide variety of plastics, such as PE and PET, are processed into dust-free, evenly dried granules. DRYON's vibrating fluidised bed ensures gentle treatment of the input material.
DRYON is also impressively cost-efficient in the drying and crystallisation of plastics: Recirculation of the air in the closed crystallisation cycle reduces both energy consumption and the volume of exhaust gases.

FOOD AND FEEDSTUFF

- Food
- Feedstuff

The DRYON is used to dry and cool foodstuffs such as cereals, tea and coffee as well as pet foods and feeds for fattening animals so that they are suitable for packaging and storage.

THERMAL PROCESSING

The requirements of our customers are our top priority. Only the optimal plant concept and the correct preparation of the feed material lead to the economic and technical advantage of our customers.

COAL, IRON AND STEEL INDUSTRY

- Coal
- Coke

The cost-efficient DRYON is used in the coal and coke industry for both drying and preheating. An explosion-protected process is used for thermal treatment in the undersize material range.

SALT

- Potash
- Rocksalt
- Sea salt

The DRYON has proven itself particularly effective in many applications in the drying and post-treatment of potash salt. The DRYON is also used successfully for drying table salt for the food industry and for the thermal treatment of ammonium sulphate for the fertiliser industry.

COOL IT ALL!

CHEMICAL PRODUCTS

- Fertilizer
- Citric acid
- Sodium perborate
- Calcium chloride
- Sulfates

The principle of constant vibration also ensures consistent quality of the product in the chemical industry. The DRYON delivers the desired results even with hygroscopic or temperature-sensitive materials.

RECYCLING

Drying of glass cullet is an essential process step in the recycling of waste glass. The DRYON ensures an uninterrupted supply by preventing material blockages at transfer points making the cullet easier to separate for the sorting process. Undesirable organic substances can also be aspirated during the drying process.

CONSISTENT PRODUCT QUALITY, HIGHEST AVAILABILITY AND PROFITABILITY.

Drying and cooling are elementary processing steps in the preparation of bulk materials in all sectors of industry. Bulk goods such as sand and grit, coal, crystalline products, foodstuffs and animal feeds as well as waste products have to be dried before they can be fed into downstream processes.

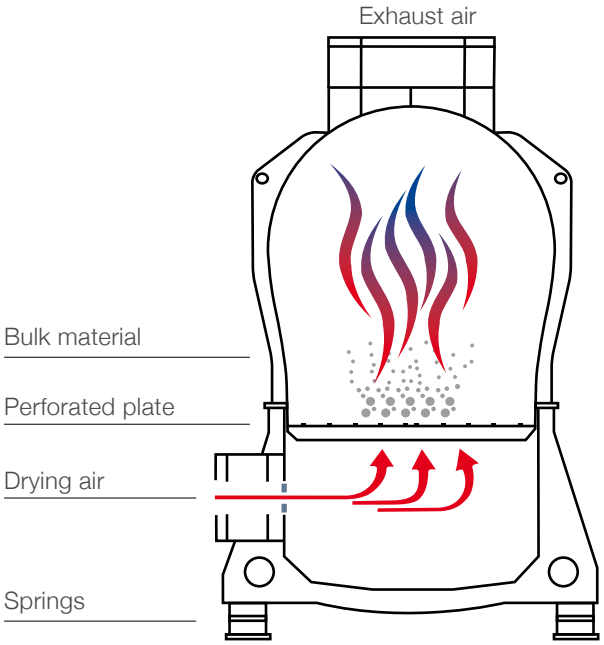
The key factors alongside consistently high quality are excellent availability and reliability of the drying plant plus its cost-efficient operation. The DRYON is particularly impressive by virtue of its operating efficiency:
The heat emitted in the cooling zone is used for drying thus reducing the energy requirement by up to 15%.

Binder+Co, with its extensive experience in the thermal treatment of all types of bulk materials and its process engineering expertise, is a leading supplier in the drying technology field.

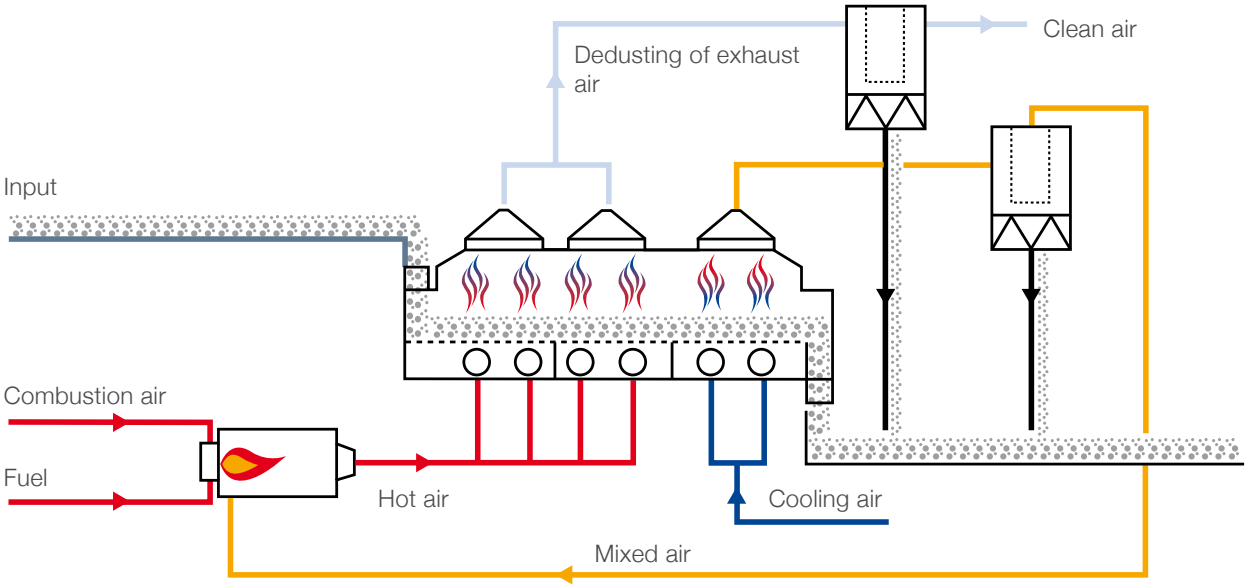
TECHNOLOGY

The DRYON works on the fluidized bed principle:
The product to be dried/cooled in the dryer is fed onto a perforated base, e.g. a perforated plate or special laser cut plates, and a stream of hot or cold air or other gaseous drying medium passes vertically upwards through the product from below. In the process the product is heated and the moisture eliminated.

The DRYON fluidized bed dryers may be constructed with drying surfaces ranging from 0.2 m² to 60 m² as required.



Plant illustration
Drying and cooling with heat recovery



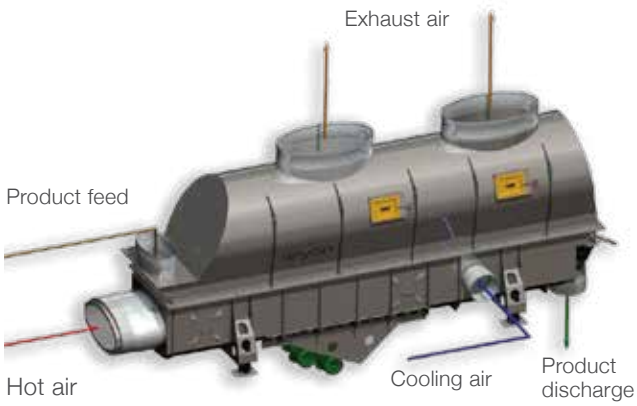
VIBRATING FLUIDIZED BED DRYERS

Vibrating fluidized bed dryers (free-running oscillation or resonance systems) are used for bulk materials with a wide range of grain sizes. Their particular advantages are:

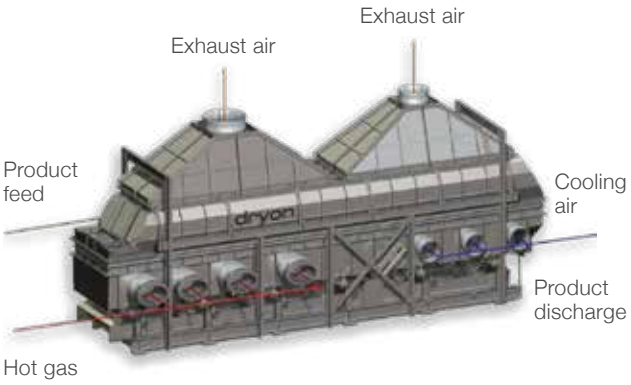
- The vibration enables optimum drying of products with fluctuating grain sizes even at low gas velocity.
- The vibration prevents the formation of bubbles in fine-grained products thus ensuring enhanced energy efficiency.
- When drying products with a wide range of grain sizes, the vibration prevents segregation of the material by loosening up coarse grains.
- The dryer can be emptied with ease as the particles are transported through the dryer by means of vibration. Changeover from one product to another is therefore quick and easy.
- Adjusting the vibration influences the product dwell time and has a particularly beneficial effect on quality.

The technical concept of the vibrating fluidized bed dryer emerged from the screening machines that Binder+Co has developed and constructed since the 1950s. The DRYON with a length of up to 8 m is designed as vibrating screen with two unbalance motors. A counter-vibration frame can be installed to reduce dynamic loads even in single-mass vibration systems.
Machines up to a length of 20 m and a width of up to 3 m are designed for higher feed capacities. In this case the resonance vibration principle is used. The result is low dynamic forces even with large vibrating masses.

Single mass vibration system



Resonance vibration system



STATIC FLUIDIZED BED DRYERS

Static fluidized bed dryers are used for uniform and fine-grained bulk materials. They have the following advantages:

- Some of the energy required is provided by internal heat exchangers which reduces the amount of air needed and also reduces the necessary fluid bed area.
- High throughput rates can be achieved using the static fluidized bed dryer.
- Smaller footprints are necessary due to larger layer heights.
- The weight of the static DRYON dryer remains low; the substructure is not exposed to any dynamic loads.

MACHINES, SYSTEMS AND ALL-ROUND SERVICE

Our DRYON dryers and coolers are hard at work on six continents. We offer innovative systems and processes that give our customers a decisive competitive advantage, alongside first-class product quality that includes high availability and rapid rectification of faults and problems by our worldwide after-sales service team.

OUR AFTER-SALES SERVICE

- *Fast spare parts supply via efficient shipping logistics*
- *Prompt repair and regular maintenance for the continous optimization of machine performance and to ensure ongoing reliable operation*
- *Extensive assistance and advice*
- *24/7 service hotline for fast problem-solving*
- *Training in operation and maintenance*

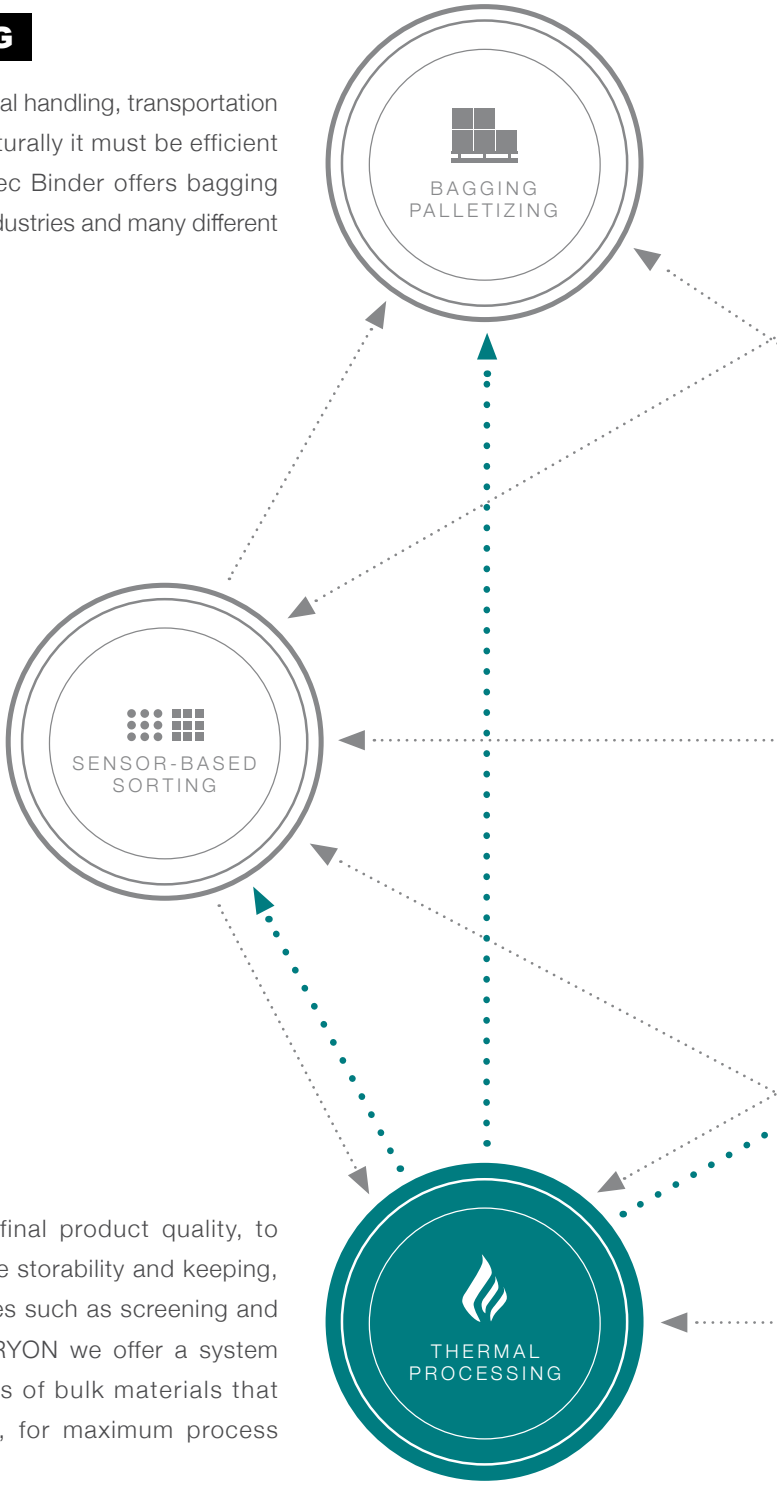
WE PROCESS THE FUTURE

BAGGING • PALLETIZING

Bagging is necessary for the practical handling, transportation and storage of bulk materials. Naturally it must be efficient in terms of operating costs. Statec Binder offers bagging and palletizing systems for many industries and many different types of bags.

SENSOR-BASED SORTING

In recycling, sensor-based sorting is a necessary and established process step for generating high-quality secondary raw materials and reducing landfill volumes. It has also become essential in the raw materials industry, to reduce the burden on downstream processes, cut operating costs and ensure high product quality. With the CLARITY and the MINEXX, Binder+Co offers sensor-based sorting systems that cover a wide range of applications in the raw materials and recycling industries.

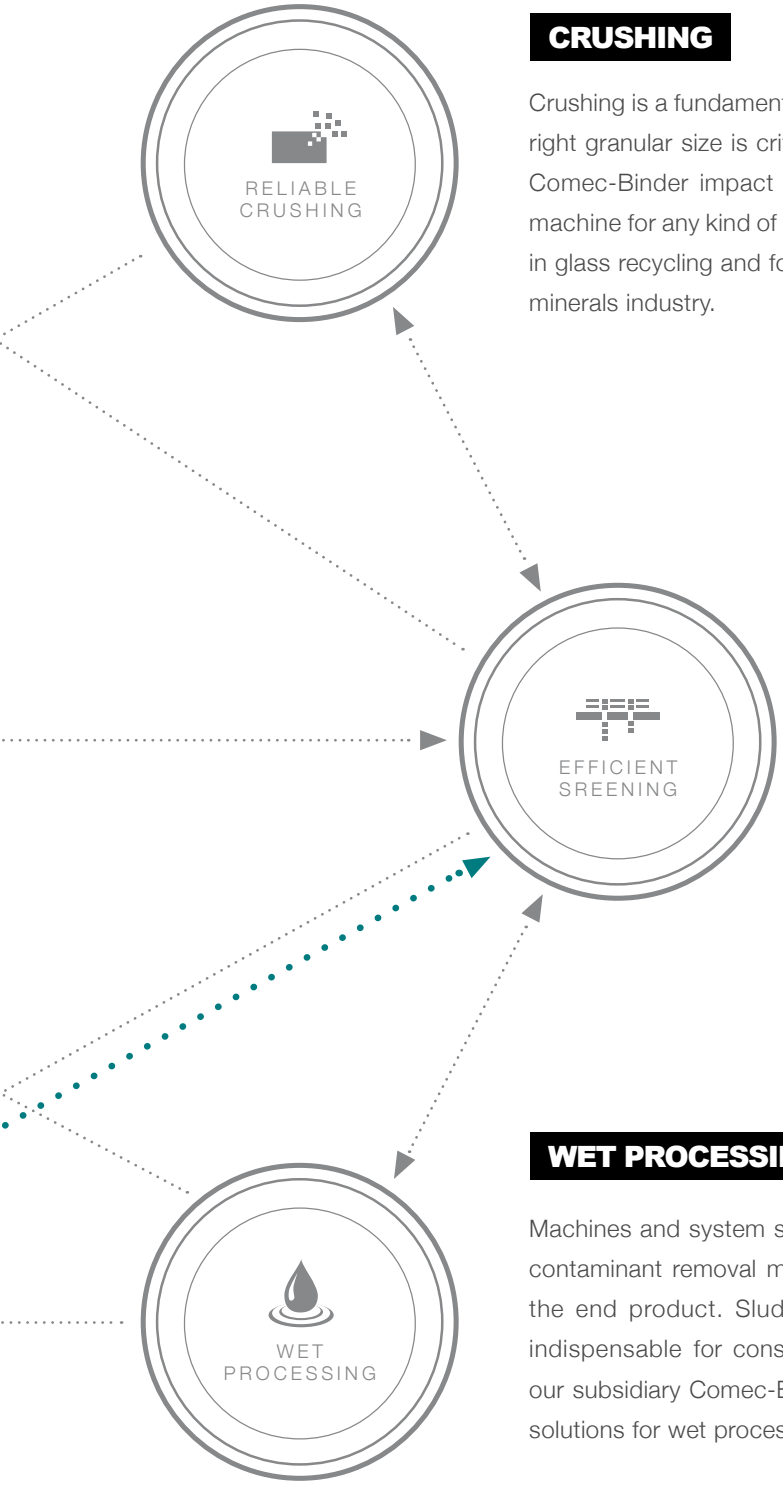


THERMAL PROCESSING

Drying is a prerequisite for high final product quality, to reduce transportation costs, ensure storability and keeping, and facilitate downstream processes such as screening and sensor-based sorting. With the DRYON we offer a system for thermal processing of all kinds of bulk materials that is reliable and easy on products, for maximum process efficiency.

PROCESSING BULK MATERIALS

Drying and cooling are elementary process steps in the treatment of bulk materials. They are decisive both for subsequent process steps and for end product qualities.



CRUSHING

Crushing is a fundamental step in processing bulk goods. The right granular size is critical for downstream processes. With Comec-Binder impact and jaw crushers we have the right machine for any kind of stone. Roll crushers are used primarily in glass recycling and for special applications in the industrial minerals industry.

SCREENING

The screening stage is responsible for getting the right particle size separation, which is critical for product quality, and for downstream processes such as sensor-based sorting. Binder+Co has proven its expertise in this field for decades with a wide range of circular and linear screens, resonance screens and the BIVITEC flip flow screens.

WET PROCESSING

Machines and system solutions for dewatering, cleaning and contaminant removal make a big difference in the quality of the end product. Sludge and process water treatment is indispensable for conserving precious water. Together with our subsidiary Comec-Binder, we offer an extensive range of solutions for wet processing.

With our extensive knowledge and broad product portfolio, Binder+Co can provide optimum system designs for good input material conditioning, giving our customers a competitive and technical edge.

WE PROCESS THE FUTURE

BINDER+CO IN

AUSTRIA

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MANUFACTURING
SALES
AFTER SALES
R&D

PROCESSING STEPS:

RELIABLE CRUSHING
EFFICIENT SCREENING
WET PROCESSING
THERMAL PROCESSING
SENSOR-BASED SORTING

STATEC BINDER
highly efficient bagging and palletizing solutions

MANUFACTURING
SALES
AFTER SALES

PROCESSING STEPS:

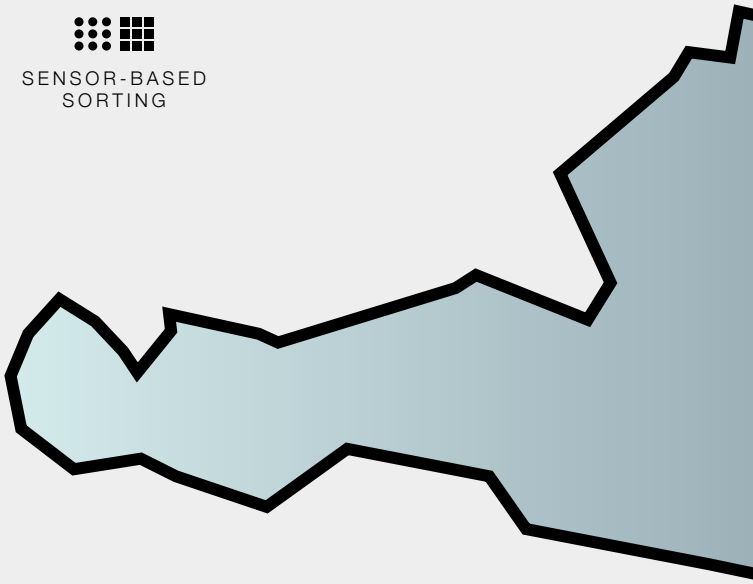
BAGGING
PALLETIZING

bublon

MANUFACTURING
SALES
AFTER SALES

PROCESSING STEPS:

THERMAL PROCESSING



BINDER+CO IN

USA

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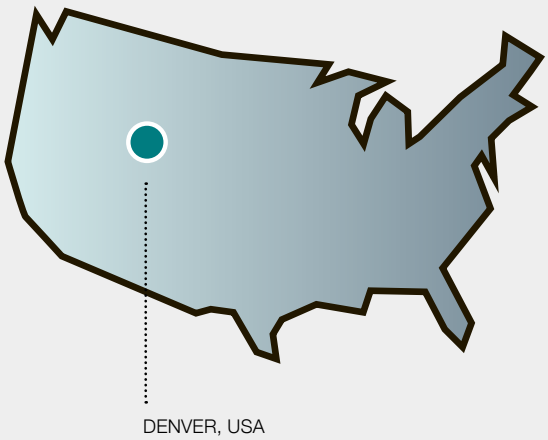
BINDER+CO USA INC.

SALES
AFTER SALES

PROCESSING STEPS:

THERMAL PROCESSING
SENSOR-BASED SORTING



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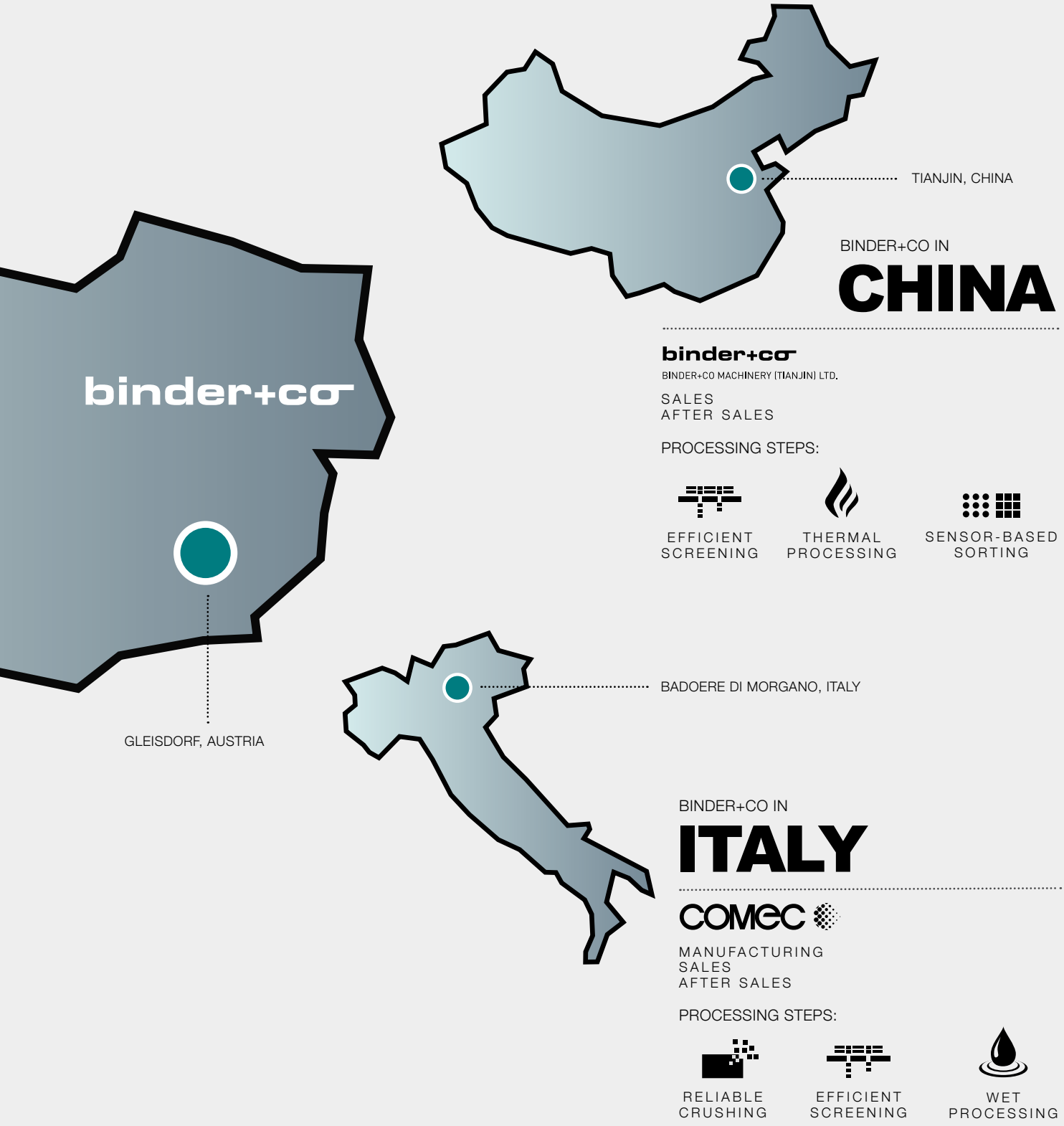

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