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# Scrap rework



Fully automated rework systems  
for bread and biscuit scraps.



**Dry and liquid rework**


**Reduces material consumptions and waste**

**Fully automated**

**No loss of food properties**

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Special applications  
**Scrap rework**

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Bakery & Biscuits



Confectionery



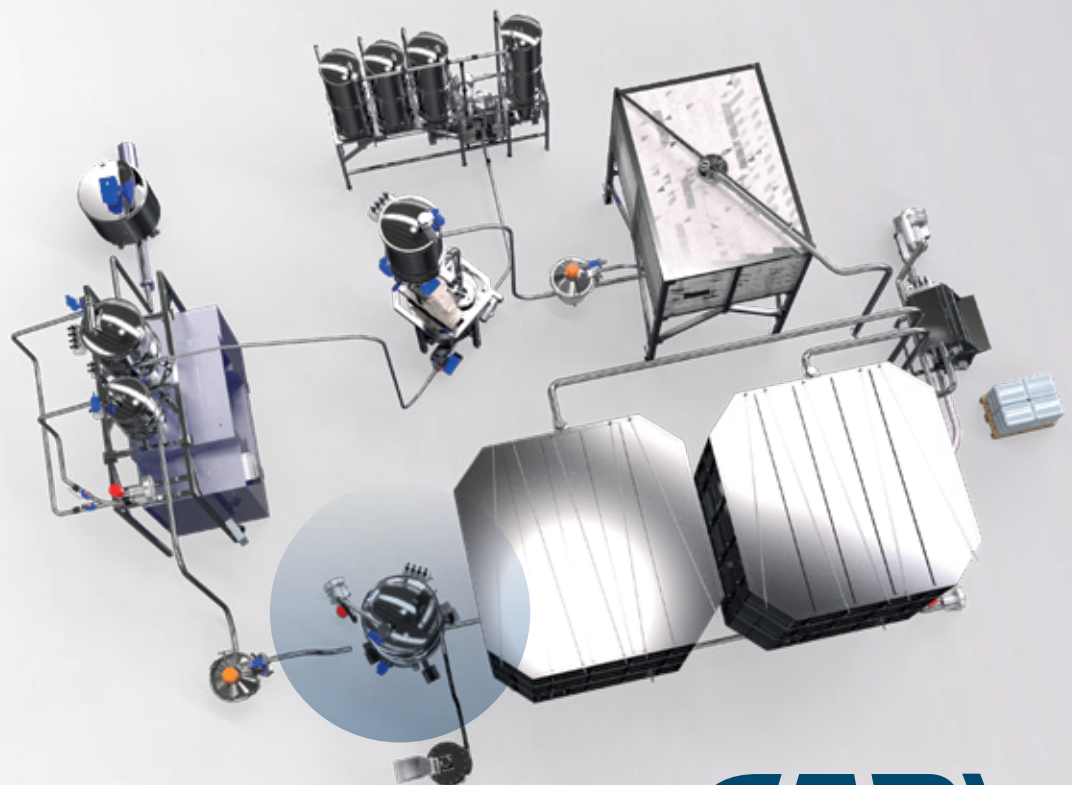
Pet food

Fully automated dry rework systems for bread and similar products such as toasts, loaves and sandwiches. The final product can be fed back into production in place of flour, sold, used for animal feed, or worked again to produce croutons or bread crumbs.

Dry biscuit rework systems are also completely automated are re-use the powders on the production line. Product can be put directly on the conveying line.

Liquid biscuit rework system for the recovery of sandwich biscuit scraps. Scraps are broken and mixed with liquid inside a stainless steel tank with agitator, creating an emulsion that can be dosed directly on mixer to produce more biscuits.

With less material consumptions and reduction of waste, reworking scraps is good for the planet. It leads to excellent return on moderate investments within a short time period. The process eliminates the need to store scraps and guarantees a high quality end product with no loss of food properties.



**Biscuit rework system**  
feeding powdered scrap  
into the mixer or into the  
storing silo for reuse in the  
production line

Special applications  
**Scrap rework**

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# Features & Technologies: Bread rework

Fully automated

For bread and similar products such as toasts, loaves and sandwiches

Final product can be fed back into production in place of flour, sold, used for animal feed, or worked again to produce croutons or bread crumbs

Loading, drying, cooling, grinding and storing with temperature control

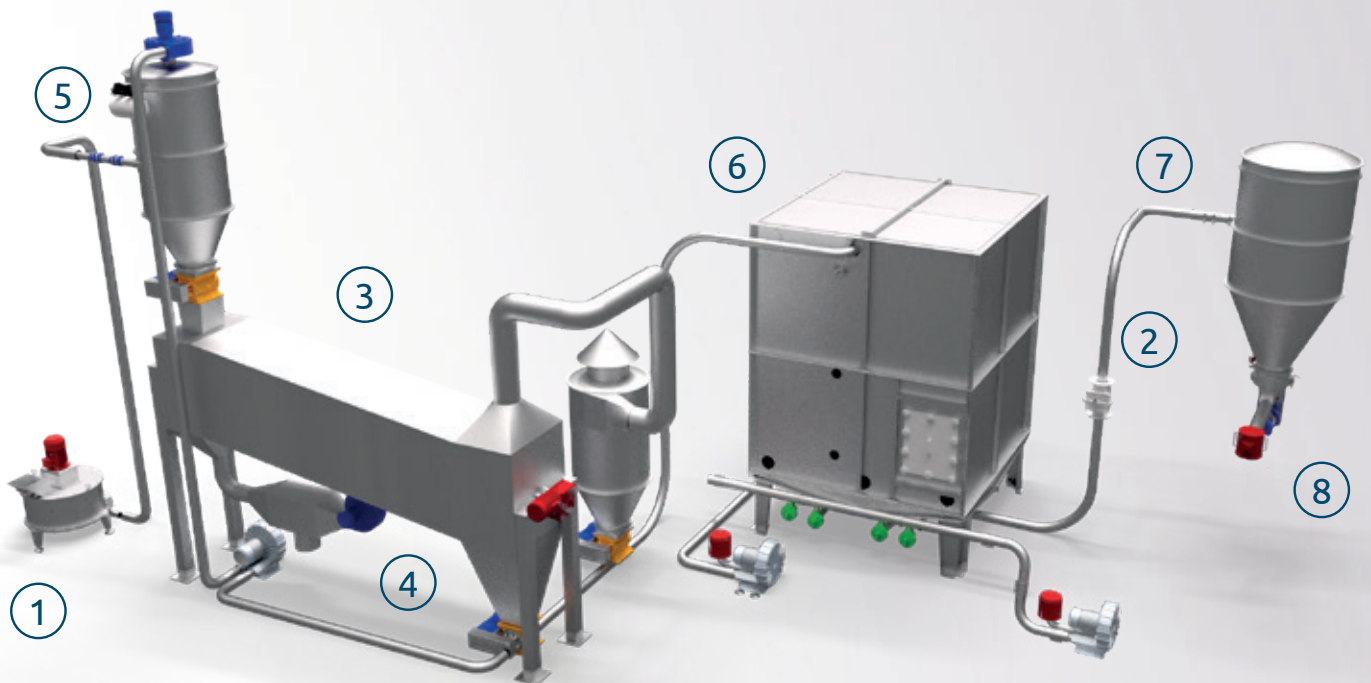
Pneumatic conveyance

No more scrap storing

No loss of food properties

Weight control in real time, integrated automation and full traceability

- |   |                          |   |                     |   |                      |
|---|--------------------------|---|---------------------|---|----------------------|
| ① | Cutting mill             | ④ | Hot air             | ⑦ | Pneumatic conveyance |
| ② | Magnet                   | ⑤ | Filter              | ⑧ | Dosing               |
| ③ | Drier with fluidized bed | ⑥ | Storage and cooling |   |                      |



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## Bread rework: the process

The scraps are first ground in a cutting mill placed at ground level to facilitate loading. Loading can be done both manually from the sacks, or directly from the line, and also from different locations through the conveyor belts.

The product is then transferred by vacuum to a hot-air dryer with fluidised bed and filter. During this phase the product acquires all necessary features for the various applications it is being recovered for.

After this the product is sent through pneumatical transport in a silo for storage with controlled temperature. The silo has a capacity of about 8 tons, is made of panels in stainless steel with fluidized bed.

The resultant re-work can be fed back into production, sold for animal feeding, or further worked to produce to bread crumbs (by adding a hammer mill in the installation) or crouton (by using an extruder.)



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Use your production scrap to make croutons and bread crumbs

# Features & Technologies: Dry biscuit rework

Fully automated

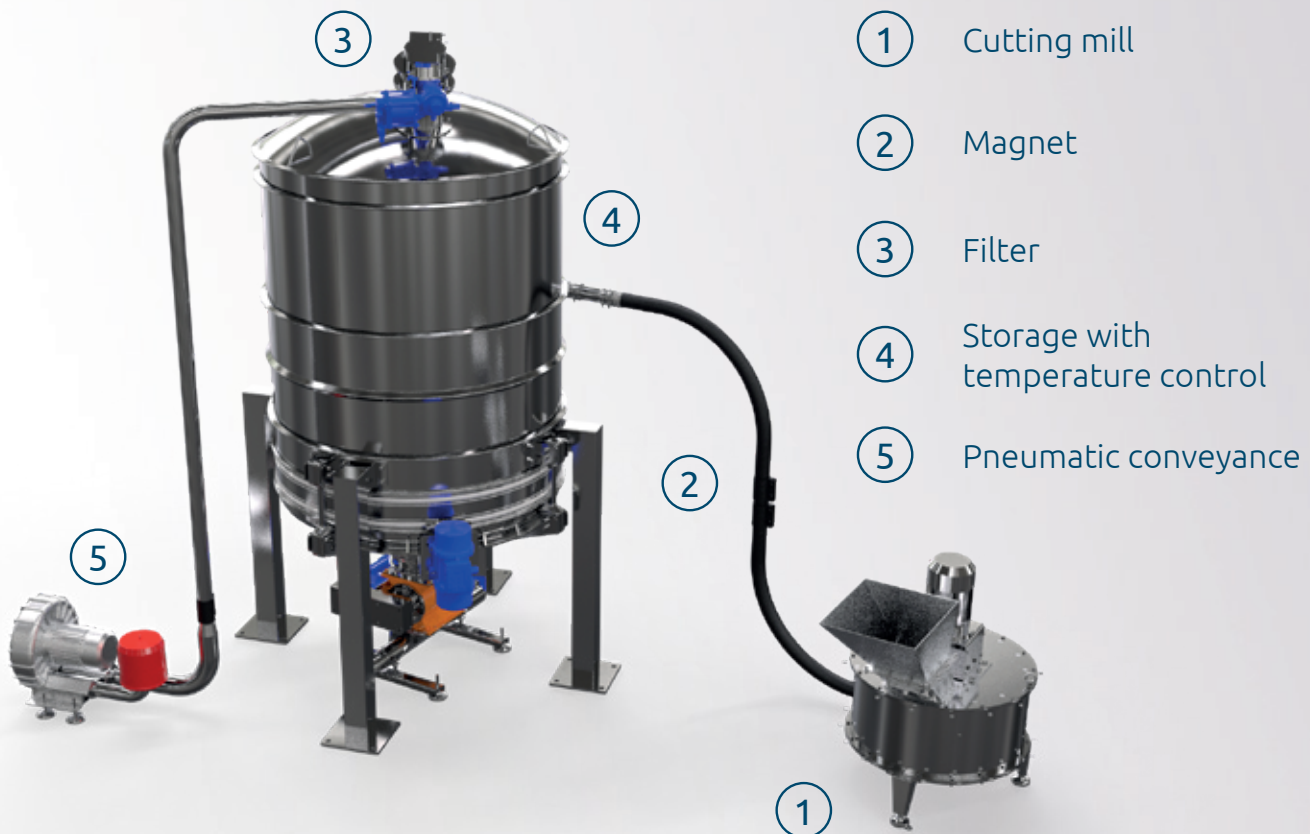
Loading, grinding and storing with temperature control

Pneumatic conveyance

No more scrap storing

No loss of food properties

Weight control in real time, integrated automation and full traceability





Biscuit rework system and cutting mill detail

# Features & Technologies: Sandwich biscuit rework

Fully automated

Liquid recovery by addition of oil or water

Loading, breaking and mixing with liquid, conveyance of the resulting emulsion to the mixer

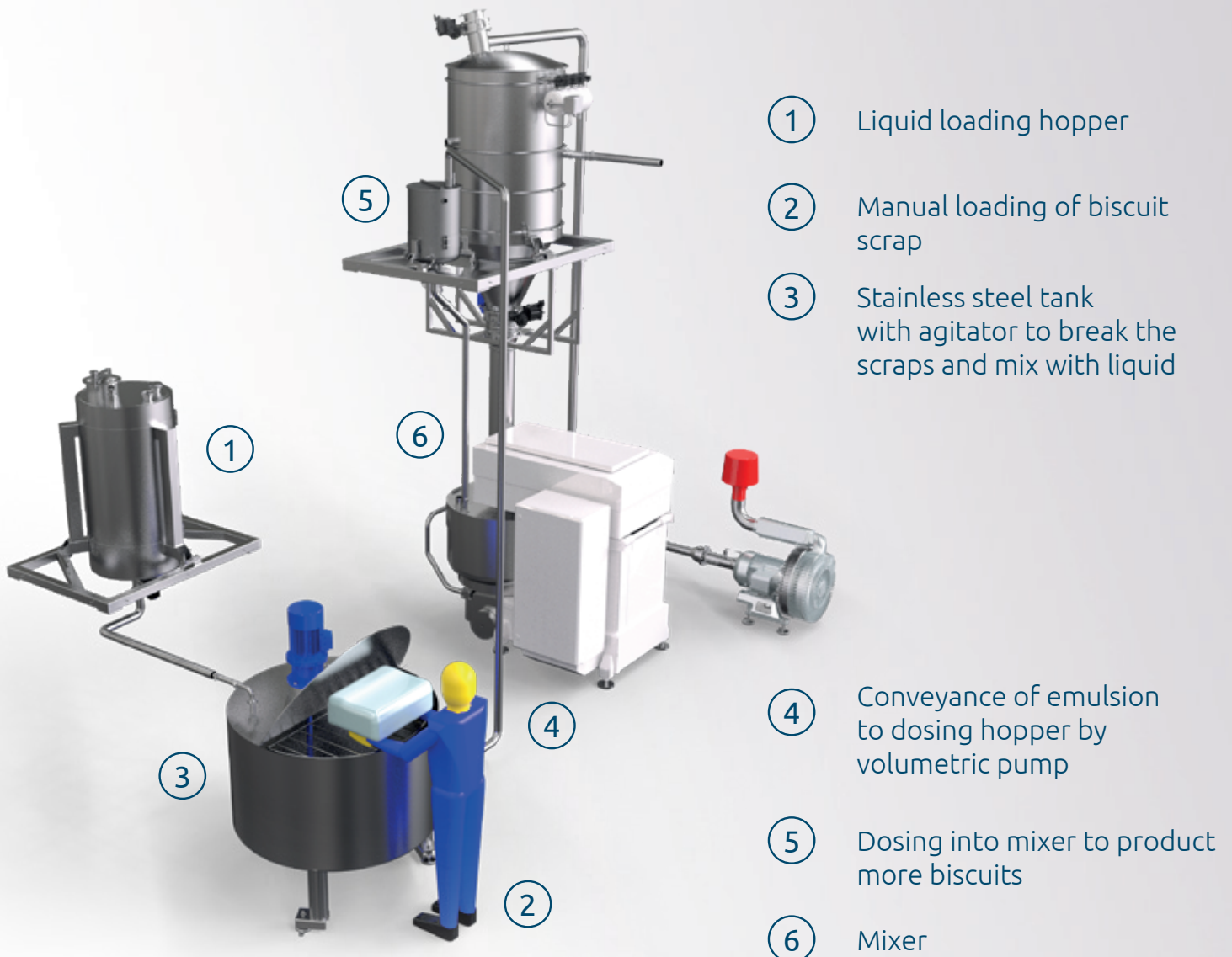
Breaking and mixing in stainless steel tank (which can be heated or double-jacketed)

No more scrap storing

No loss of food properties

Fully customized and suitable to variable production volumes

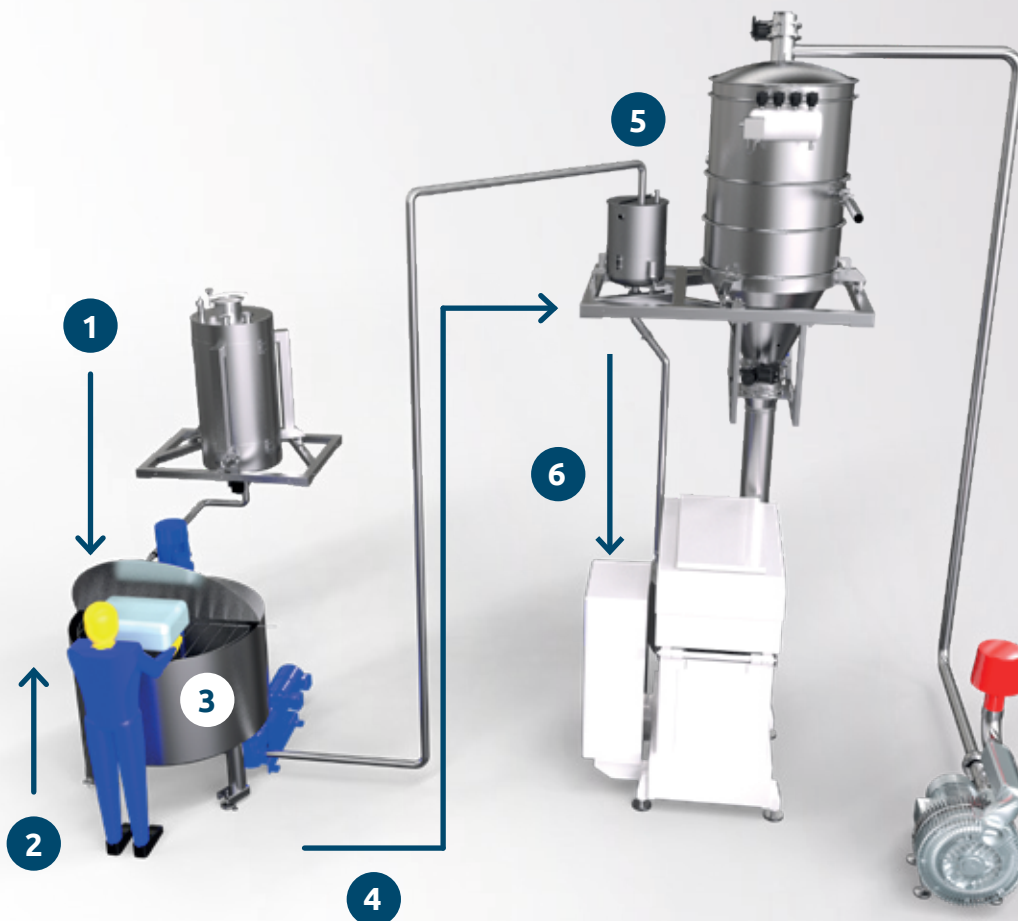
Weight control in real time, integrated automation and full traceability



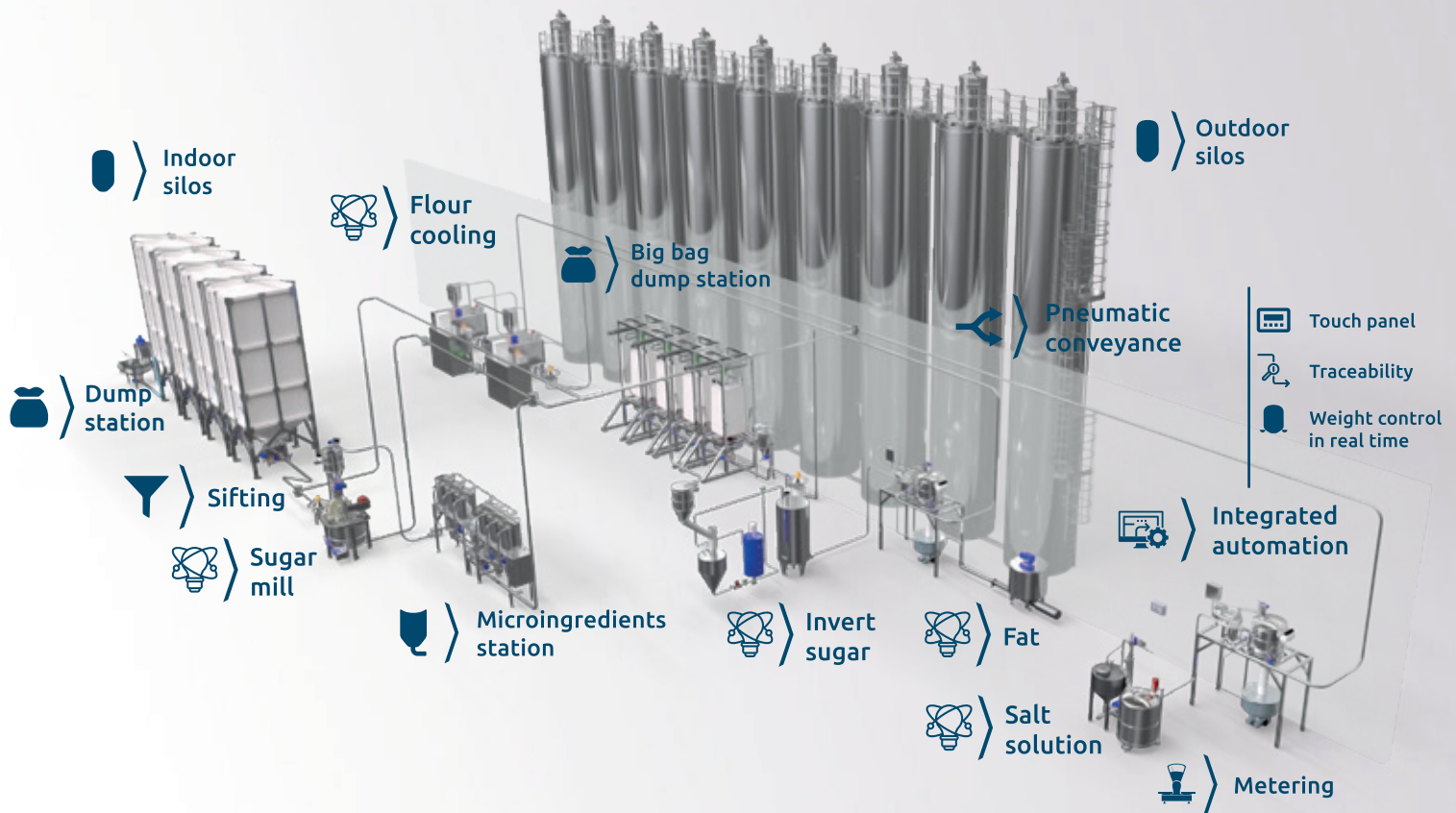


## Sandwich biscuit rework: the process

Scraps are loaded manually (1) into a stainless steel tank with agitator and liquid (oil or water) is loaded by weighing liquid hopper (2). The biscuits are broken and mixed with the liquid inside the tank (3), creating an emulsion. The emulsion is conveyed (4) on a dosing hopper by volumetric pump (5) and dosed on mixer (6).







## Bulk-handling systems for the food industry since 1985



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CONVEYING



DOSING



AUTOMATION

Product and process analysis  
 Engineering and control  
 Direct manufacture  
 Project management  
 Installation and commissioning  
 Monitoring and service



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 Confectionery  
 Pasta & Cereals  
 Dairy  
 Premix

Functional food  
 Baby food  
 Pet food  
 Chemical  
 Pharmaceutical