

INVERTED SUGAR



Systems for the preparation, storage and dosing of invert sugar.

Sweeter and fresher products with less consumptions

Fully or partially automatic system

Allows for both acid and enzymatic hydrolysis

Complete control of parameters

such as amount of water and temperature

Cool before storing or after with exchanger and chiller

Continuous recirculation

Manual or automatic feeding and dosage of catalyst

The CEPI system handles the preparation, storage and metering of invert sugar. It can be fully or partially automatic depending on customer's needs. Like all CEPI technologies, it is highly versatile and allows for both acid and enzymatic hydrolysis and complete control of parameters such as amount of water and temperature.

The system comes with a hopper for crystal sugar, heating device, production tank and exchanger with continuous recirculation, and storing tank. Invert sugar can be cooled before storing or after through an exchanger and chiller. The system includes temperature check with sensors and weighing cells, and allows for both manual or automatic feeding from the line and dosage of catalyst.

CEPI's solution ensures shortened heating times and highly efficient mixing, delivering a homogenous blend in a very short time. The system optimizes steam, reducing waste and costs as well as production times. It standardizes and rationalizes production as well as improving the quality of the final product. With vast food technology expertise, CEPI is also able to provide support during the creation of a recipe, to find the perfect combination of process and ingredients to match the final product.

INDUSTRIES



BAKERY



CONFECTIONERY



BABY FOOD



FUNCTIONAL FOOD



BEVERAGES

AUTOMATION



OPERATOR
PANEL



PROCESS
CONTROL



TRACEABILITY

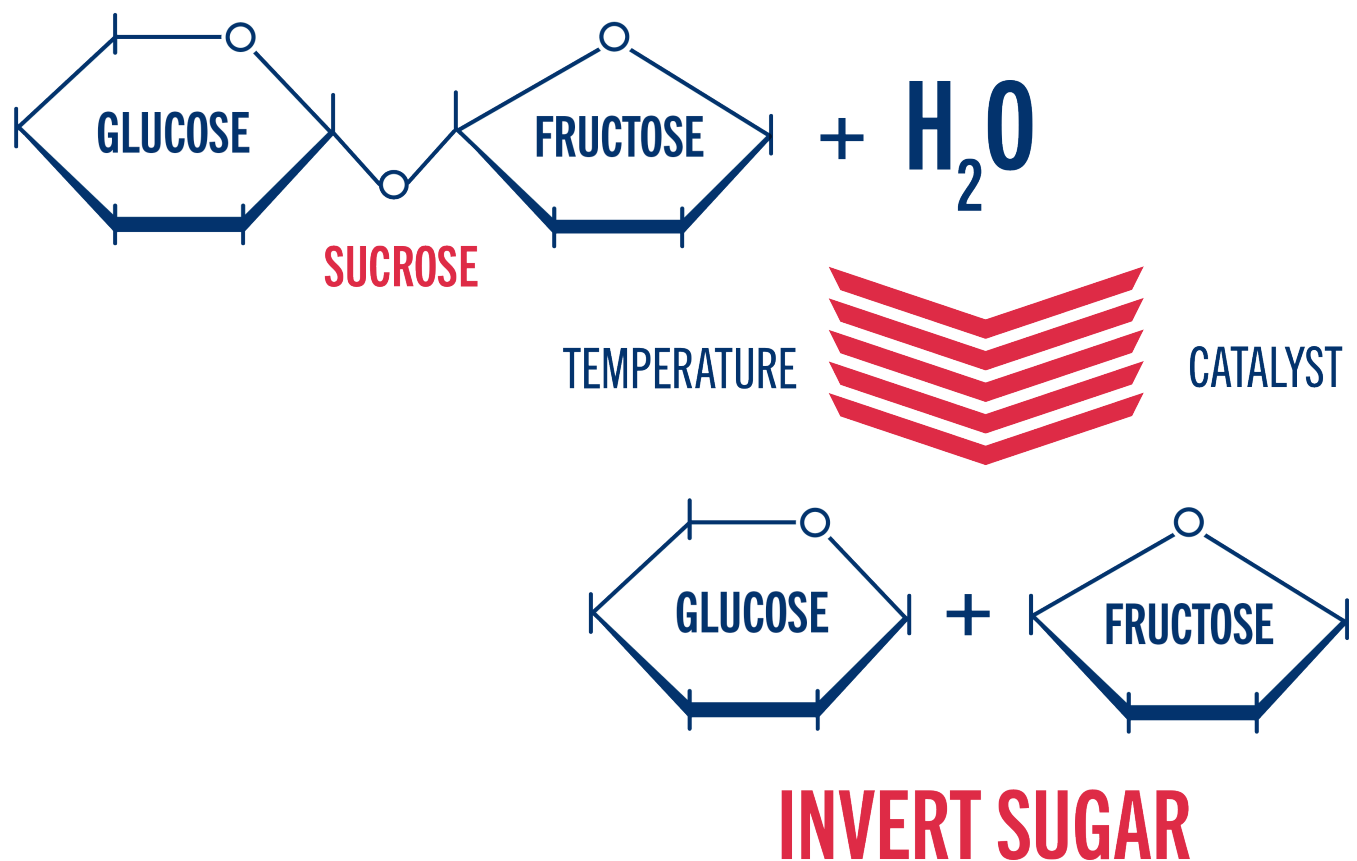
- Shortened heating times and highly efficient mixing
- Delivers a homogenous blend in a very short time
- Optimizes steam, reducing waste, consumptions and production times
- Double jacket, or heated, or insulated production and storage tanks
- Exchanger with continuous recirculation
- Heating device for both acid and enzymatic hydrolysis
- Temperature check with sensors and weighing cells
- Manual or automatic feeding from the line
- Dosage of catalyst

- 1 Production tank
- 2 Storage tank
- 3 Exchanger
- 4 Heating device
- 5 Feeding hopper



Invert sugar is made from splitting sucrose into glucose and fructose by a process called hydrolysis, in which it is mixed with water and heated with a catalyst until the bonds between glucose and fructose break. The catalyst can be enzymes such as invertase or an acid ingredient like citric acid. The acidity can be then reduced or neutralised with alkaline substances such as baking soda.

As well as the type of catalyst, the amount of water and sugar and the temperature of the heating process can be adjusted: more water will lead to longer conversion times and more inversion, and higher temperatures generally lead to a thicker product.



- > Invert sugar has a sweetening power about 20-25% higher than sucrose, highly reducing consumptions
- > Invert sugar lowers the freezing point and delays crystallisation and as such, it improves the upright power of creams and makes ice cream and fillings creamier. It is very useful for icings and glazes and provides a consistent, soft centre to candies and chocolates
- > With its higher affinity for water, invert sugar can be used as humectant in cakes and similar products, and it enhances colour and flavour as well as freshness
- > Invert sugar makes baking faster as well as adding softness to baked goods
- > With less crystallisation, invert sugar creates a smoother texture and improved mouth feel
- > Due to the presence of free fructose and its natural affinity for fruit flavours, invert sugar is used for soft drinks as well as confectionery or bakery goods that contain fruit or are fruit flavoured
- > Invert sugar gives a richer crust colour to bread and pastries as it boosts the Maillard reaction, the chemical reaction between amino acids and sugars that adds distinctive colouring and flavour to browned food
- > Invert sugar is ideal for use in energy drinks and sports drinks, because fructose is more satiating and because of the added taste from glucose and fructose

Special applications are the ingredient management technologies that CEPI developed to complete storage, transport and dosing operations. Our goal is to offer a turnkey solution that covers the entire process from the input of the ingredients to their dosing in an organic way. *Our motto is: if your process needs it, we can do it. If we cannot do it yet, we will develop it, just for you.* Our solutions evolve to match each individual demand from the manufacturer side, leading to unparalleled technological range:

Fermentation technology

Flour cooling

Sugar mill

Bread and biscuit rework

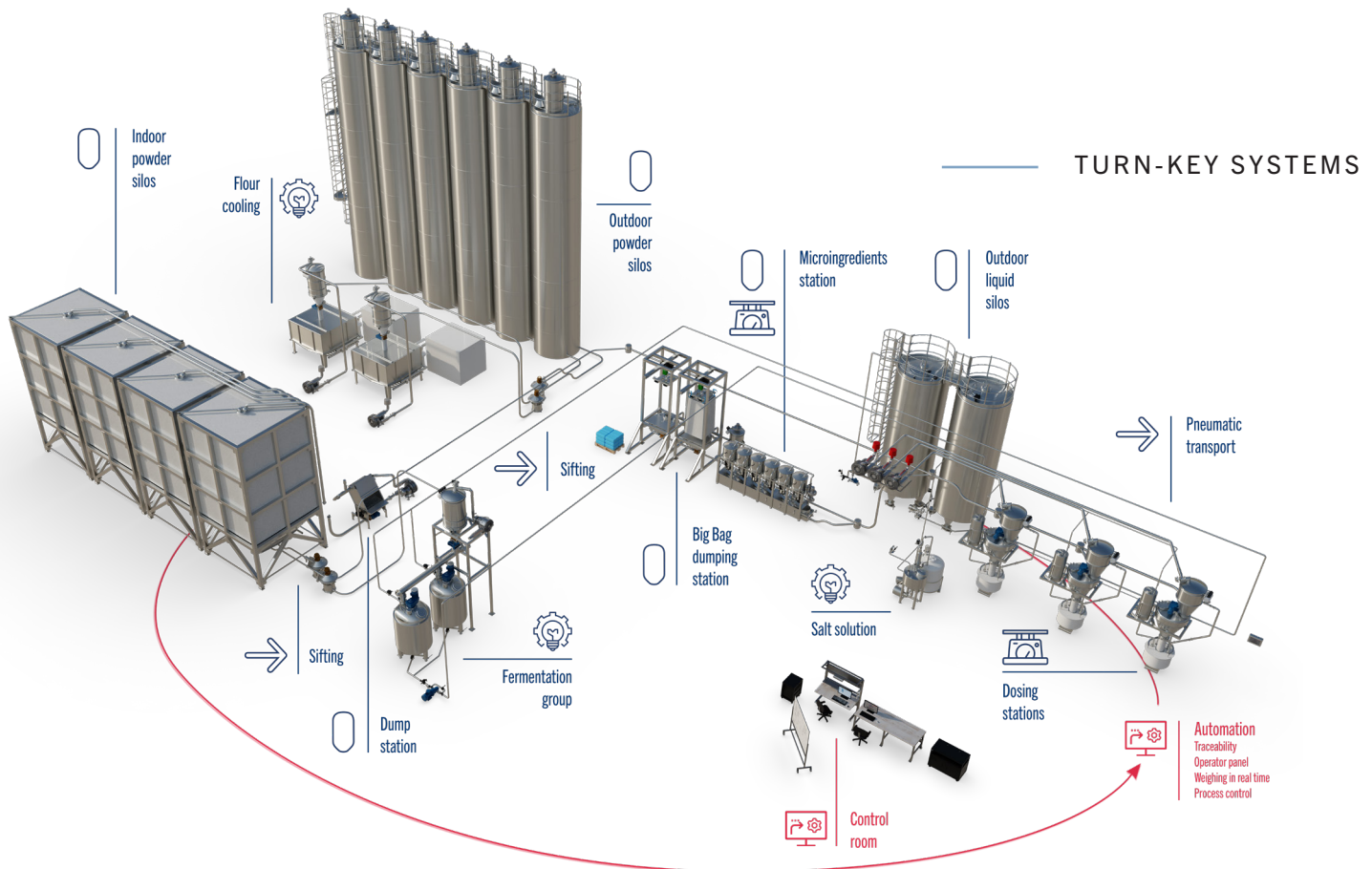
Production, storage and dosing of invert sugar

Production, storage and dosing of salt solution

Fat tanks

Cold fat dosing in paste form

Heat treatment



CEPI designs, manufactures and commissions bulk-handling systems for the storage, transport and dosing of raw materials, as well as fully integrated automation and technologies to complete all food production processes. Since 1985, we have worked with the most important companies from all sectors of food manufacturing.



STORAGE



TRANSPORT



DOSING



SPECIAL



AUTOMATION