

The **KRONES** syrup room
Room for creativity and innovation



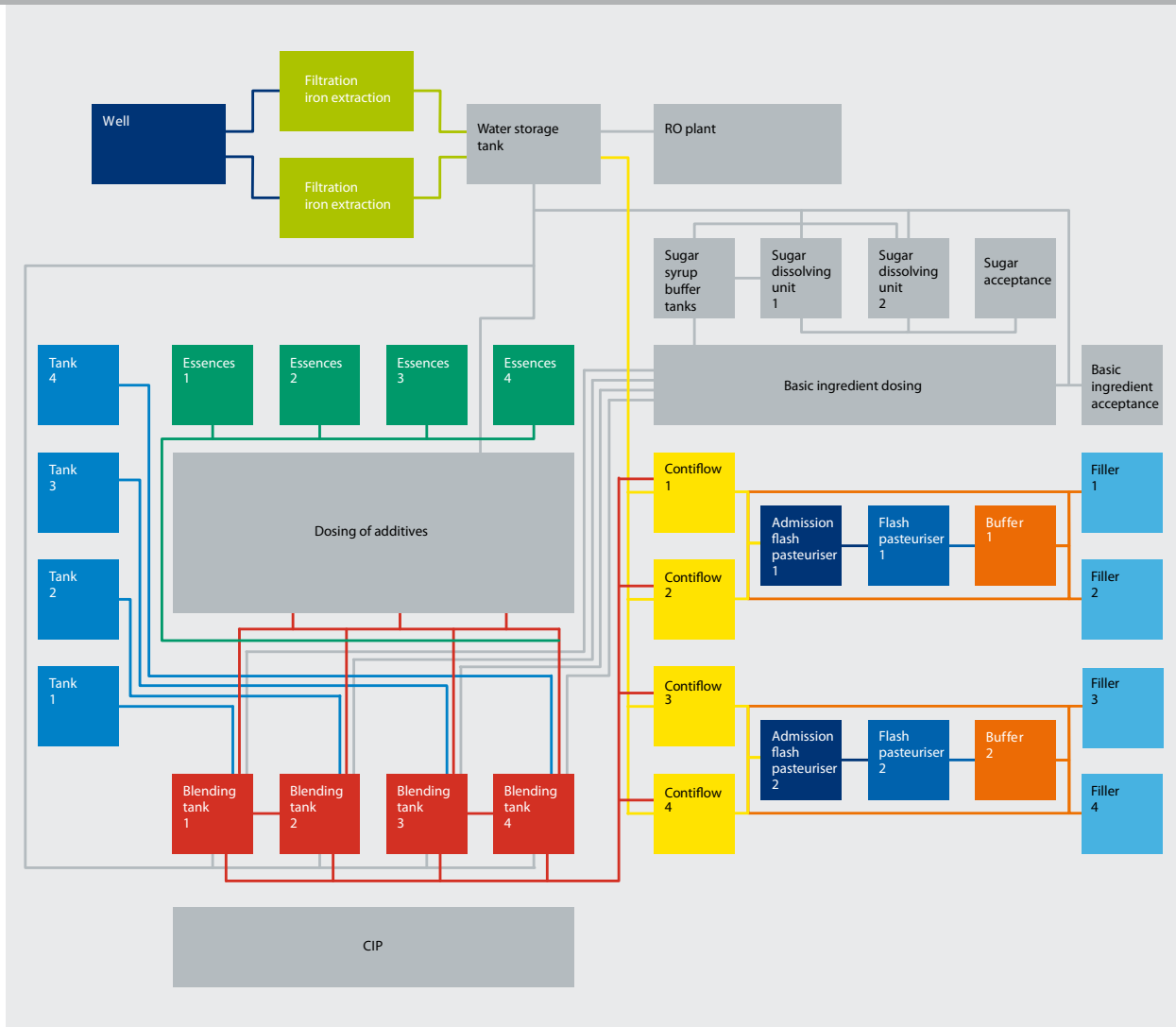
Sweet, fruity, sour, bitter – syrups from individual recipes

KRONES syrup room

The syrup room is the starting point for innovative experiences in flavours where your product designers can develop their new ideas. The benefits from these perfect working conditions for mixing new nuances of flavours and developing successful products are many: Highest syrup quality, flexibility in the recipe design as well as on-going control throughout the manual, semi-automatic or automatic preparation of syrup variants.

Depending on the production concept, the basic components used for the beverages come in powder, liquid or concentrate form. Suitable dissolving methods, mixing processes, heating and filtration steps constitute the basis for the individual syrup variants then used in mixing the beverage. Soft drinks, juice spritzers, juice beverages, alcohol-based cocktails or energy drinks all benefit from the syrup you have made up yourself. The foundation for success on the market by your products is thus laid by the first step in the production process.

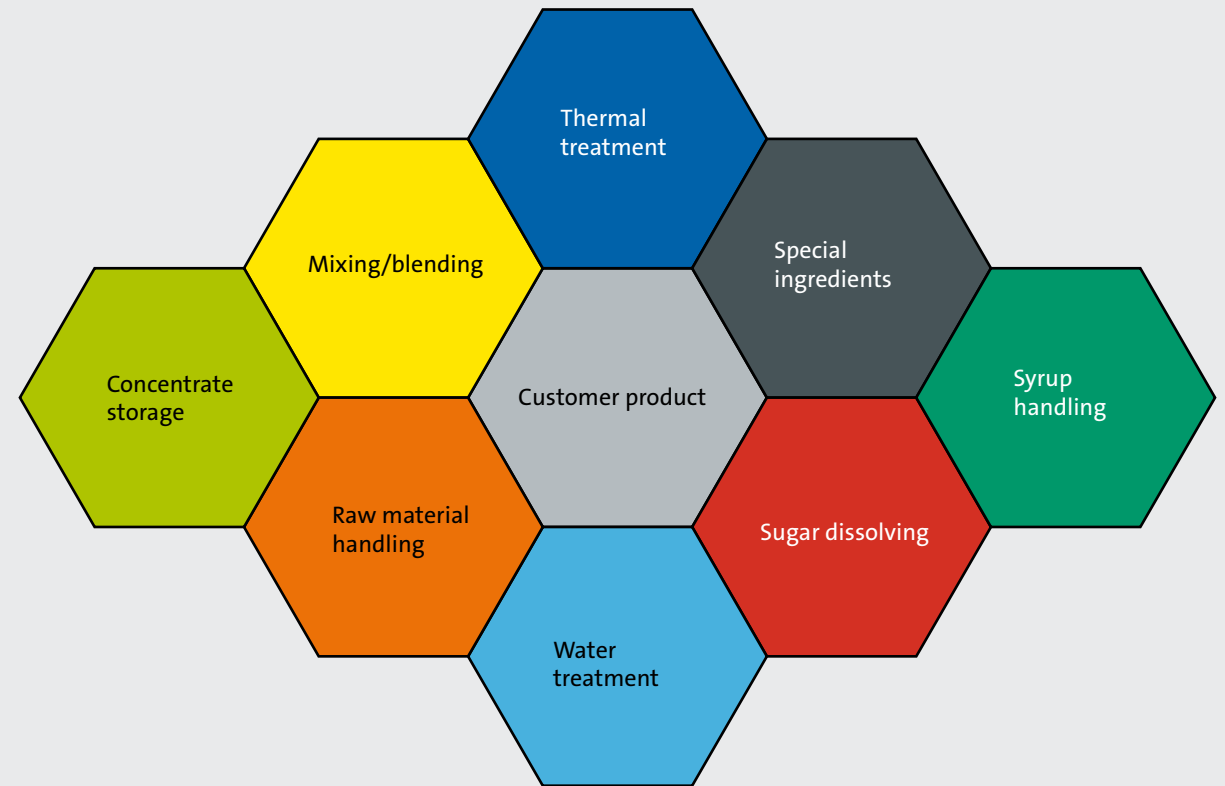
*Fully automatic
production of
the individual
syrup-constituents*



Process technology from a single source

KRONES syrup room

The process technology for beverages starts with acceptance of the starting materials, covers the widely different mixing, carbonating and heating processes and often includes the filling operations as well. The highest possible product quality is the most important criterion in all these production steps. At the same time the units and systems are providing the accuracy, reliability, economic efficiency and flexibility for this.

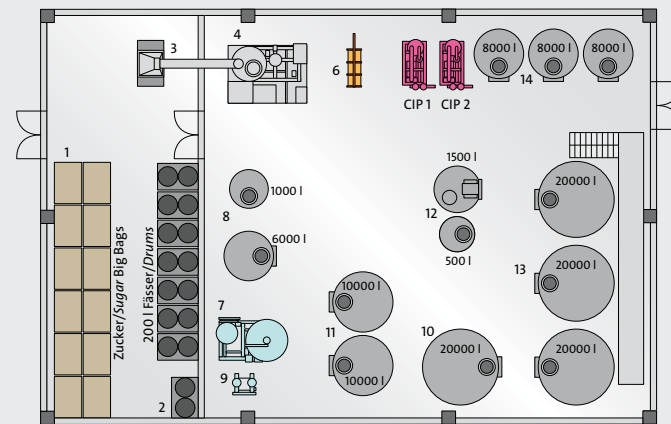
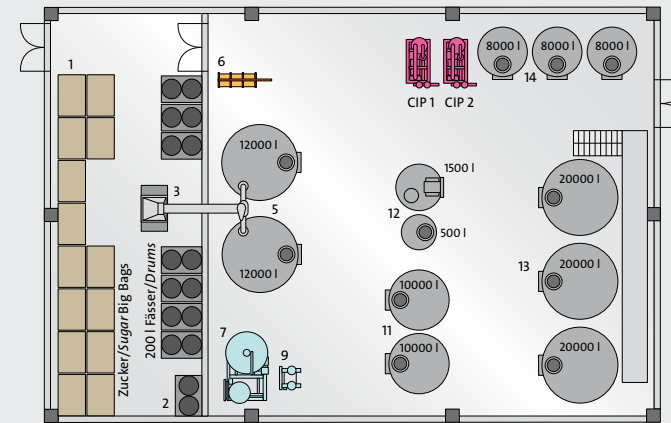


*Every product
requires opti-
mised treatment*

Syrup mixing – Step for step to product success

KRONES syrup room

All elements of syrup preparation are combined with one another for coherency in the KRONES concept. Depending on the production philosophy processing is either continuous or batch-wise. The flexibility in the options available for arranging the modules needed will guarantee success and efficiency.



*Syrup preparation by
dissolving the sugar in batches
(top chart)*

*Syrup preparation by
dissolving the sugar continuously
(bottom chart)*

*Arrangement examples
(20,000 l/h)*

- 1 Sugar and concentrate storage tanks (54 m²)
- 2 Suction pipe end piece
- 3 Sugar chute
- 4 Continuous Sugar dissolver
- 5 Dissolving tanks
- 6 Sugar syrup pasteuriser
- 7 Diatomaceous earth filter
- 8 Layout of containers / Buffer tank
- 9 Bag filter
- 10 Sugar syrup storage tank
- 11 Juice concentrate storage
- 12 Powder dissolver
- 13 Mixing tank
- 14 CIP system

Modules of syrup preparation

Water treatment

KRONES syrup room

With the KRONES water treatment system Hydronic, KRONES is offering a standardised system which can be adapted to individual requirements and is thus the right technology for many application cases.

The water treatment system Hydronic in detail

- Modular system made up of three modules for treating water for use with beverages and food:
 - Media filtration to separate out materials, with different filter media like activated carbon, sand and special granulate
 - Ultra-filtration by the membrane technique to remove undissolved substances as of a particle size of 0.01 μm , and for removal of all bacteria without changing the water composition (dissolves salts, water hardness, chloride / sulphate content, etc.)
 - Reversed osmosis for demineralisation by membrane technology with integrated rinsing from salt-free permeate to prevent scaling and biofouling
- Various sizes for 10 m^3/h , 30 m^3/h , 50 m^3/h , 100 m^3/h
- Link to the line data storage system (LDS) is possible

Alternatively and depending on the water quality and particular processing requirements, customised concepts for water treatment are also possible. The integration of such techniques as reversed osmosis, ion-exchanger systems, ozone treatment, UV sterilisation or heat treatment is possible here.

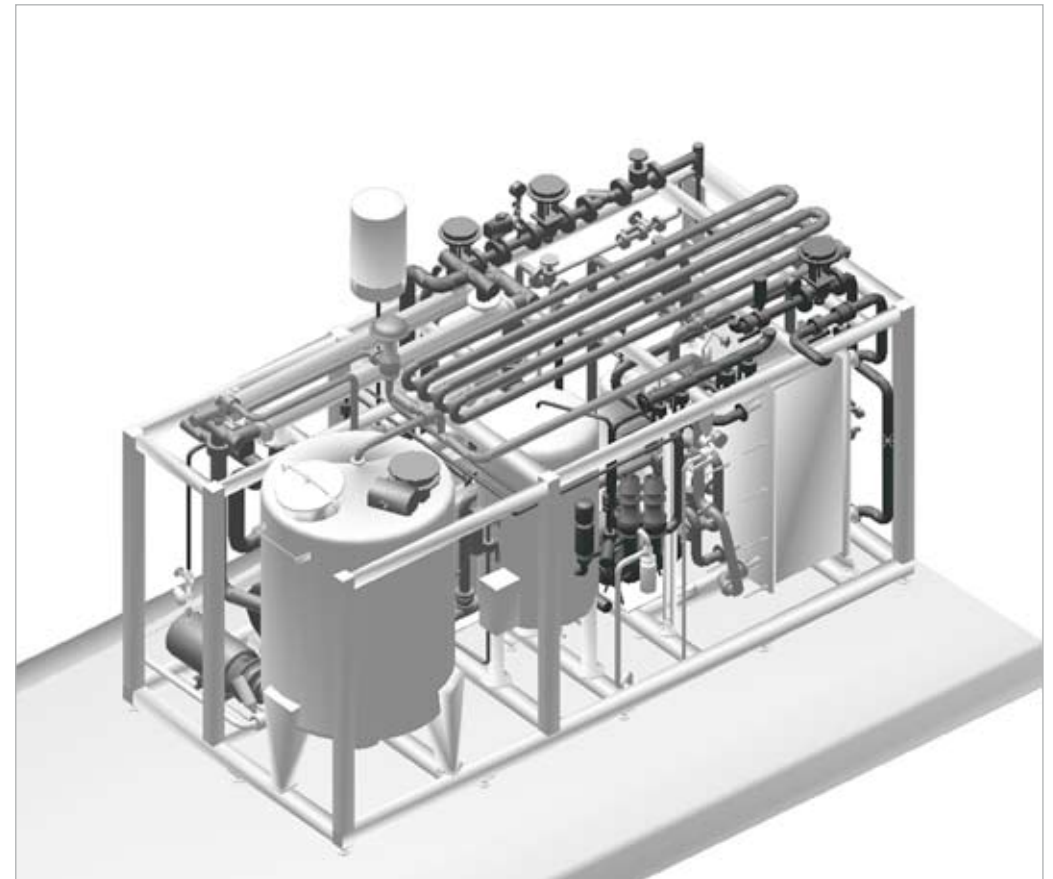


Modules of syrup preparation

Sugar preparation

KRONES syrup room

- The liquid sugar receiving station or a silo tank for storing crystalline sugar is the starting point for sugar preparation in the syrup room.
- Either a sugar solution as a hot solution at 85 °C or a cold solution at 35 °C to 45 °C is used at the step in the process where the sugar is dissolved.
- The method of dissolving can either be a batch-wise or a continuous process.
- In the next process the syrup is either heated in the sugar syrup pasteuriser or simply kept in storage.
- The filtration steps for decolourising and cleaning the sugar solution can be designed to meet the individual requirements: Cartridge filters, layer filtration, filtration systems using diatomaceous earth active carbon are available for selection here and can be matched to the specific production requirements.



Dissolving the sugar continuously

Modules of syrup preparation

Concentrate and powder constituents

KRONES syrup room

Designed concentrates and essences are processed at the concentrate and powder-dissolving stations, and the food-grade acids in crystalline or powder form are also dissolved here. Agitation and mixing devices are used depending on the viscosity of the components, the batch size and the solubility.

Starting with receiving the material in tanks, drums or cans, the storage facilities for the concentrate include crushers for frozen products, mixers for chilled products and products which have already thawed.

By storing at ambient temperature, in insulated or in chilled storage vessels, the character and aspect of freshness when the concentrate is processed, are both preserved exactly in accordance with individual production requirements.

Concentrate pumps and containers



Modules of syrup preparation

Multiblend central mixing system

KRONES syrup room

The fully automated recipe-controlled mixing system Multiblend can be used to mix the syrup components to give soft-drink components for subsequent dispensing.

Mixing liquid basic materials like syrup or for the aroma-dosing in the production of spirits and liqueurs is realised by the inline method such that no additional effort whatsoever is required during production. The basic materials can be processed here either in sequential or in parallel dosing steps. All flavour variants for subsequent product mixing can be made up on a dosing line with serial ports.



Multiblend

Application

- Processing powder, liquid or frozen starting materials to a give wide variety of products with or without pulp, fibres or fruit cells
- Production of finished products and finished syrups for further processing

Output range

Production of syrup products for an output which can be agreed to meet your individual requirements and fully cover the performance of your system

Additional equipment

- Equipment for receiving and processing frozen and semi-frozen concentrates
- Equipment for receiving and processing large quantities of components in powder form
- Equipment for mixing fruit pieces
- Inline multi-component mixer for intermediates and finished products
- Inline finished-product mixing with carbonation
- Product filtration
- CIP systems and cleaning concepts
- Product-heating systems



Quality control in the laboratory

Your benefits

KRONES syrup room

■ Continuous soft-drink production

With the first step in syrup preparation you are already using the expansive know-how from the KRONES process specialists. All the steps in producing soft drinks from the syrup and mixing, right through to filling and packaging, are thus available from a single source. This is a major advantage which will save time when planning and realising the system.

■ Individual concept

The KRONES syrup room design is an individual concept based on defined modules and then tailored exactly to meet your specific requirements.

■ Highest precision

All components are characterised by the high accuracy for the various basic materials such that you can rely on an exact system with precision for processing the individual syrup and product components.

■ Inclusion in Manufacturing Execution System (MES)

The top-level design for the control and planning software of the KRONES MES means that all stock levels and all production flows can be supplied with all the necessary information from the syrup room.



Sugar delivery

The KRONES syrup room

Contact

Visit by a customer consultant

Further information material

Mr

Ms

First name

Surname

Company

Street, house number

Post Code Town

Country

Telephone

Email

Contact person at KRONES (if known)

[▶ Send by email](#)



LCS Lifecycle Service

Each company, each facility, is unique. By making the appropriate selection from the capabilities offered by LCS Services and LCS Parts + Software, you will receive a package tailored precisely to your actual needs. And in addition, you benefit from our comprehensive expertise gained from operating production lines in the food and beverage industries, and in the cosmetic, chemical and pharmaceutical sectors as well.

[▶ more ...](#)

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TCO Total Cost of Ownership

The client is the paramount focus of KRONES' product strategy. This is why many of our new ideas emerge from close liaison between our service and sales people and the client on site. The R&D departments at KRONES then develop the appropriate products, geared without exception to cutting our clients' operating and raw-material costs (total cost of ownership).

[▶ more ...](#)



enviro

KRONES stands for innovative machines and high-performance lines. enviro epitomises its commitment to saving costs, by reducing energy consumption and ensuring economical use of natural resources. Intelligent machinery design to a maximised level of technical excellence enables us to grant exceptionally long lifetimes and economical efficiency to optimised ergonomics and safety for the operators and the maintenance staff alike.

[▶ more ...](#)

