Continuous Soft Drink Blender

Blender for final syrup

APPLICATION

The Continuous Soft Drink Blender is a unit that blends liquids continuously in a specific preset ratio. The blending process in a Continuous Soft Drink Blender can run continuously if raw materials are available and process demand exists for the blended product.

Typical applications are:

- Continuous production of final syrup for delivery to a final blender or storage tanks
- Continuous beverage production

HIGHLIGHTS

- The Continuous Soft Drink Blender is constructed with a recirculation loop that allows dynamic correction of any deviations online per each ingredient line, thus increasing the blender's accuracy.
- The system will automatically correct deviations in °Brix on a sugar feeding line by adjusting the water supply to ensure product specifications are always met.
- Ingredients that require a small amount of dosing have an independent recirculation line which is switched into dosing mode when the exact flow rate is reached.

WORKING PRINCIPLE

The Continuous Soft Drink Blender consists of several buffer tanks for individual ingredients. Each tank is equipped with a circulation pipe. The mixing ratio of each product component must be dosed according to the recipe used.

On pushing the start button, all buffer tanks fill to the preset working level. When these levels are reached, product components start to circulate in the circulation pipes. Circulation speed is monitored by mass flow meters and regulated by speed-controlled pumps and/or control valves.

When the mass flow of all components matches the recipe's set points, all circulation lines switch towards the mixing vessel simultaneously. Ingredient lines that require a buffer system automatically adjust their supply to the buffer vessel based on the dosing rate into the blending recirculation.

The mixing vessel blends all components homogeneously. It is equipped with a continuous level sensor that controls the outlet valve of the system and keeps the level constant in the vessel.

MAIN COMPONENTS

- Main frame
- Mixing tank including main recirculation
- Different ingredient streams
- Measuring loops including ingredient
- recirculation pump and flow meter
- Pneumatic and manual valves

TECHNICAL DATA

All parts in contact with the product are made of AISI 316L. The frame is made of AISI 304L.
0-60 °Brix in product; accuracy ± 0.1 °Brix

Electrical power

400 V, 50 Hz
Other supply voltage or frequency available

Compressed air

600 kPa (6 bar)

EXAMPLE LAYOUT

Measurements depending on capacity and ingredient configuration. Available on request.

CONTROL PANEL (OPTIONAL)

The Continuous Soft Drink Blender is controlled by an Allen Bradley ControlLogix or Siemens PLC.
This is fitted in a cabinet located on the frame but can easily be moved away from the module if required.

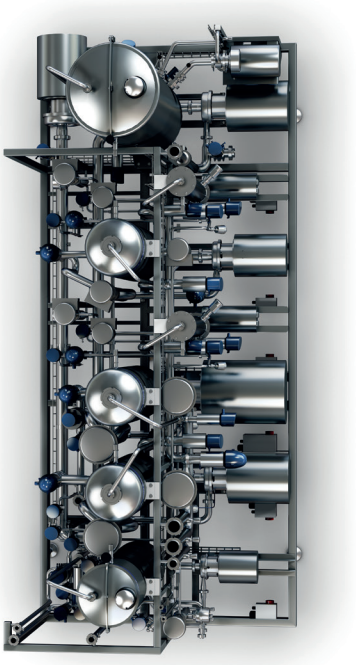
Our standard sizes support these capacities:

- 20,000 l/h
- 40,000 l/h
- 60,000 l/h

Other capacities on request.

Ingredient streams

Standard units contain four to six ingredient streams.
Other configurations can be handled on request.



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