

In-line carbonation unit



Application

The Tetra Alcarb Spark is a carbonation unit, used for continuous carbonation of soft drinks and other beverage for carbon dioxide content up to 10 g/l.

Working principle

The soft drink enters the Tetra Alcarb unit where CO2 is injected directly into the product line without utilising any porous disc or sinter candle. CIP of product as well as CO2 line can be done without any reduction of flow.

Specially designed holding tubes with mixers/accelerators, which create micro bubbles ensuring total dissolution of the gas into the product. The control of the CO2 injection is done by ratio, using a mass flow meter in the gas line. An optional analyser control system, which continuously measures the CO2 content at the outlet of the unit can be added.

The process sequences, including CIP, are automat ically controlled by a PLC with an operator interface on the control panel. The interface provides information such as operating parameters and alarmstatus.

A pressurised buffer tank with remote setting of pressure, ensures that the product is kept at a pressure higher than the saturation pressure of the injected CO2.

All routing is automatically controlled from the PLC.

Concept

The Tetra Alcarb is a skid-mounted unit equipped with PLC and operator interface HMI which is pre-tested with water prior to delivery. All parts in contact with product are made of stainless steel AISI 316. Other parts are made of stainless steel AISI 304.

Tetra Alcarb – In line carbonation unit

Main components

Basic unit

- Pressure controlled centrifugal product pump
- Mass flow meter and control valve for CO2
- HP-Carbonator injection head and holding tube with HPmixers
- Set of valves, pipes and fittings
- Stainless steel control panel with PLC, operator interface, main switch and emer gen cy stop, motor starters, solenoid valves, and alarm
- Pressurised holding/resting tank, 2000 l, 2500 l or 5000 l
- Routing system for holding/resting tank, diameters 63, 76 or 101 mm

15000-20000 20000-36000 36000-55000

±0,2 g/l

0-10g/l at max 15°C

Technical data

Capacity

Standard flow rates, I/h	

Carbonation level Accuracy carbonation

Flowchart

Optional equipment

- Cooler, for each capacity designed cooler with a cooling efficience of 10-20 °C temperature drop of final beverage
- Package chiller to above
- CIP return pump
- Remote pressure setting of holding/resting tank
- Analyse instrument for °Brix and CO2 level



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