

# Alfa Laval CARBOSET™

## Carbonation

### Introduction

The CARBOSET™ process module is designed for continuous carbonation of liquids.

### Application

Carbonation of beer, soft drinks and other beverages.

### Benefits

- Robust construction
- Compact design
- Efficient dissolving of CO<sub>2</sub>
- Versatile and adaptable to different process requirements
- Low maintenance.

### Design

The CARBOSET unit is self-contained and pre-assembled on a frame. In compliance with food industry regulations, all components in contact with the process liquids are made of stainless steel with heat resistant seals.

### Working principles

CO<sub>2</sub> is injected in the product line directly, without the need for utilising any porous disc or sinter candle. This means that CIP of the CO<sub>2</sub> and product lines can be carried out without reduction in flow rate.

A specially designed mixer/accelerator makes sure that the CO<sub>2</sub> dissolves rapidly into the product by a combination of turbulent flow and increased pressure.

An analyzer is included after the mixer and carbonated product is analyzed for CO<sub>2</sub> content.

The reading from the analyzer is passed on to a PID controller in the PLC. This controller receives a continuously updated reading and displays it. The reading can also be presented on a pen recorder.

The desired CO<sub>2</sub> value is set on the controller, which then automatically adjusts the CO<sub>2</sub> control valve, thereby holding the CO<sub>2</sub> at the desired level.

The control panel with the PLC controls the plant operation.

Relevant process data displayed:



- Actual and setpoint CO<sub>2</sub> content
- Plant status
- Controller settings
- Alarm status.

A fail-safe system is monitoring the operation.

The plant is designed for cleaning in place. Both the CO<sub>2</sub> and product line can be cleaned without removing any parts from the pipes.

### Options

- Different automation levels
- Remote control
- Communication with other control systems.

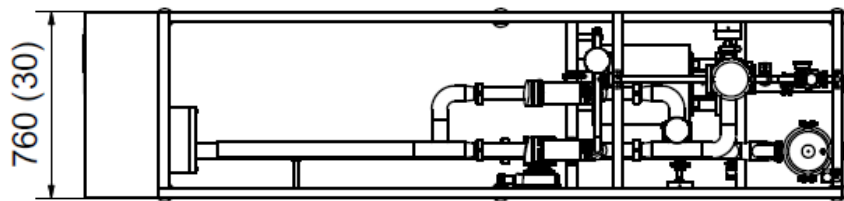
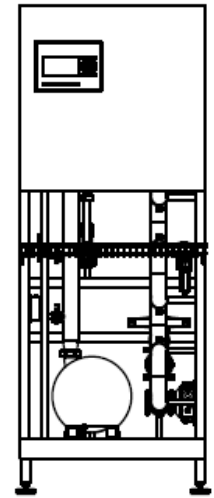
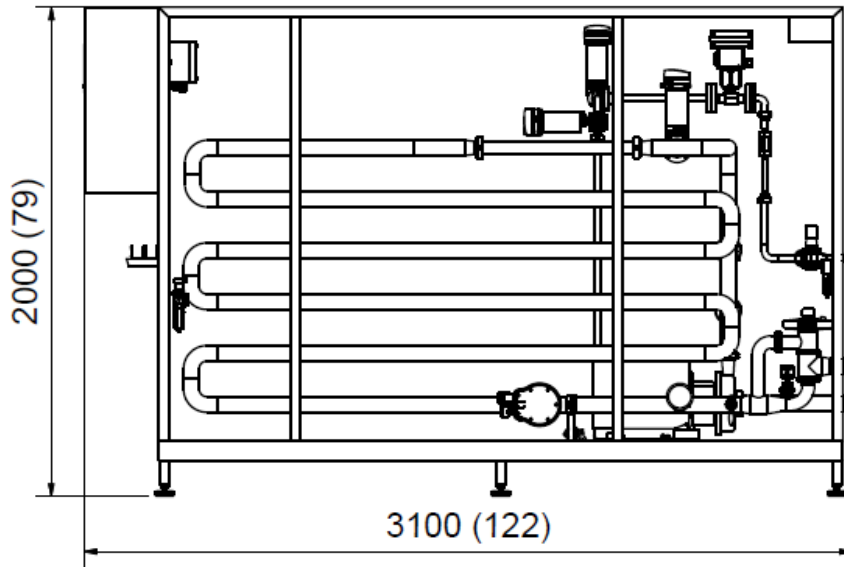
## Technical data

Capacity range	45-1,100 hl/h
Carbonation level	Up to 7 g/l (final product)
CO <sub>2</sub> analyzer accuracy	± 0.05 g/l
Utility data	Depending on capacity range

## Dimensional drawing

Approximate dimensions and weight depending on capacity range, e.g. 160 hl/h

Length x width x height	3.1 (122) x 0.76 (30) x 2 (79) m (inches)
Weight	250 kg



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