



# PROSAT

## CONTINUOUS CARBONATION UNIT



P.H.E. for Water Cooling

### WORKING PRINCIPLE:

PROSAT is a continuous Carbonation unit for the automatic production of carbonated beverages. In the configuration PROSAT DS the system is based on stage of Water degassing, by vacuum pump, combined with the latest technologies of carbonation field. Static and dynamic mixer guarantees high quality

standards of the final product. The system processes 2 component (Product & Co<sub>2</sub>) that are dosed by a high-precision flow meter. The different ingredients are mixed on line and at the end stored in a final buffer tank. The buffer tank is designed, manufactured and tested according to applicable provisions of the PED Code (standard). All components are

assembled and pre-piped at the factory.

The system consists of:

- Water deaeration unit under high vacuum atmosphere (only in the version Prosat DS);
- Water dosage unit using magnetic flowmeter;
- Carbon dioxide dosage unit using mass flowmeter;
- Finished product buffer tank.

### APPLICATIONS:

Production of Carbonated water or Wine.

### OUTPUT RANGE:

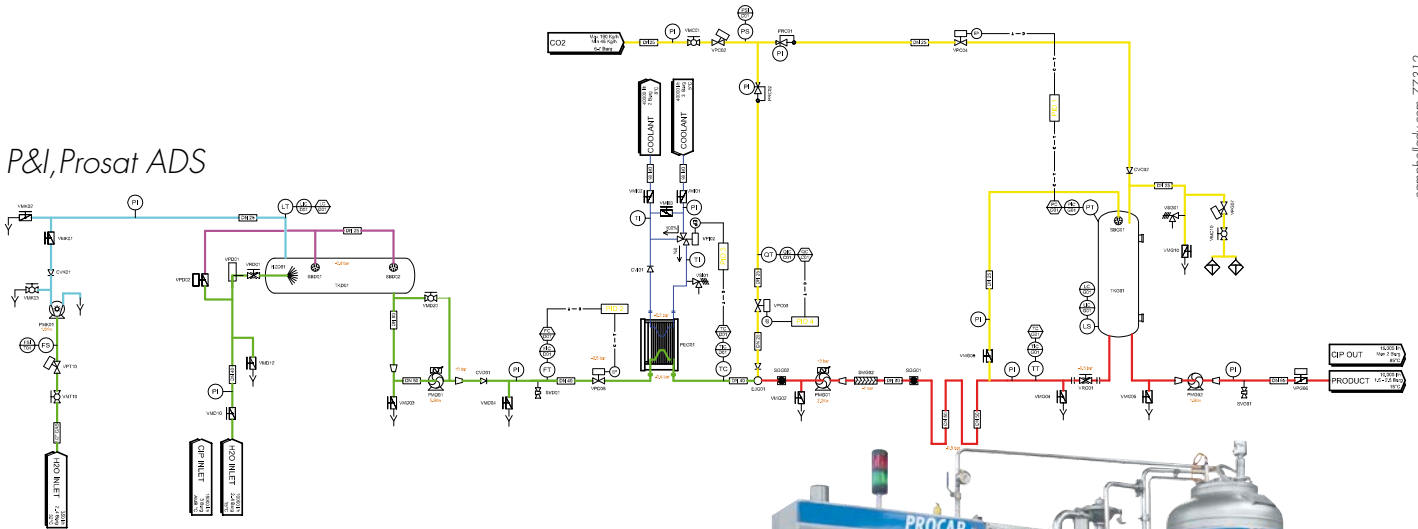
Various model are available from 2.500 up to 40.000 lt/h.

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## CONTINUOUS CARBONATION UNIT

www.matrix-srl.com

P&I, Prosat ADS



### DESIGN FEATURES:

- All components mounted on a rigid, stainless-steel base plate;
- PLC controlled adjustment of the mixing ratio;
- Advanced flowmeter system for carbonation;
- Complete product recipe management;
- Frequency-controlled pumps;
- All parts contacting product or gas are made of stainless steel Aisi 304 or higher grade;
- Cleaning in the closed circuit via CIP;
- Spray Balls into filler tank for optimal cleaning and fast product change-over;
- Vacuum pump with water saving system that can be cleaned during CIP;
- Easy & intuitive touch-screen operation.

### MODELS:

#### PROSAT DS

(Deaeration and Storage)

Standard Solution for WATER, with magnetic flow meter on water and mass flow meter on CO<sub>2</sub>.

#### PROSAT ADS (Automatic, Deaeration and Storage)

High Performance Solution for WATER, with high CO<sub>2</sub> Accuracy and full automatic synchronization with Filler and CIP.

#### PROSAT AS

(Automatic and Storage)

High Performance Solution for WINE, with high CO<sub>2</sub> Accuracy and full automatic synchronization with Filler and CIP.

### USER BENEFITS:

- Product flow control by means of level regulation in the buffer tank;
- Flexibility change over of different product is done quickly, easily and it is reproducible by working recipes stored on PLC;
- Easy maintenance. The machine is well accessible so that all maintenance and service job can be done easily.
- Product Quality. Low oxygen pick up ensures high product quality during the S.L.;
- Reduced gas consumption through flow control according to the level in the buffer tank.

### ADDITIONAL EQUIPMENT:

- PHE Plate heat exchanger for product cooling with chilled water;
- Monitoring and adjustment of CO<sub>2</sub> volumes in the product;



Wine/Beer Carbonator

- Product Distribution panel for CIP & PRODUCTION;
- Double deaeration in one tank;
- Energy saving insulation of the final buffer tank for cold filling;

- Product contact part made of AISI 316;
- MODEM. Upon request, remote maintenance possibility.

Model	MIN** flow rate (lt/h)	MAX** flow rate (lt/h)	Carbonation Range (gr/lt)	CO <sub>2</sub> Accuracy* (gr/lt) for DS version	CO <sub>2</sub> Accuracy* (gr/lt) for ADS version
<b>PROSAT 4</b>	2.500	4.500	Min. 3 Max. 9	+/- 0,15	+/- 0,1
<b>PROSAT 6</b>	3.000	6.000			
<b>PROSAT 10</b>	5.000	10.000			
<b>PROSAT 12</b>	6.000	12.000			
<b>PROSAT 15</b>	7.500	15.000			
<b>PROSAT 20</b>	10.000	20.000			
<b>PROSAT 25</b>	12.500	25.000			
<b>PROSAT 30</b>	15.000	30.000			
<b>PROSAT 35</b>	17.500	35.000			
<b>PROSAT 40</b>	20.000	40.000			

\* During steady state conditions \*\* Other rangeability possible upon request.



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