

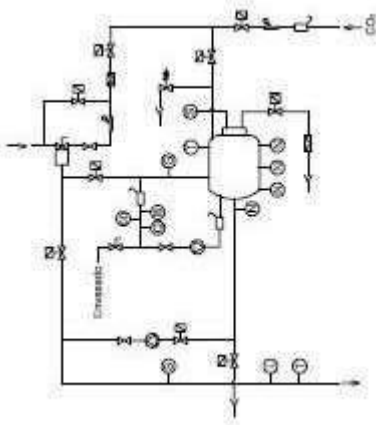


## Unit II - Topic 1 Carbonation

What is a carbonator machine?

A soda machine or soda maker is a home appliance for carbonating tap water by using carbon dioxide from a pressurized cartridge. The machine is often delivered with flavorings which can be added afterwards to the carbonated water to make soda, like, for instance orange, lemon or cola flavours.

Carbonation Carbonators



In the beverage industry, carbon dioxide is dissolved into liquid solutions such as beer, wine and soft drinks to give drinks that fizzy texture. Carbon dioxide also acts as a preservative as it prevents the development of microorganisms.

Carbon dioxide is a uniquely suitable gas for soft drinks because it is inert, non-toxic, and relatively inexpensive and easy to liquify.

The carbonation process consists of adding Carbon dioxide to a liquid at low temperatures using high pressures. Carbon dioxide is generally added to the finished product, although it can be mixed with the water at any of the earlier stages. The amount of carbon dioxide pressure varies depending on the drink.

Carbon dioxide is injected automatically into the cold mixing line using booster pumps of high capacity. MachinePoint Engineering supplies carbonators based on the drinks needs, and the current lines that are in process. We provide the carbonators installed and commissioned, and previously tested in our engineering center.

Systems are tested using CO<sub>2</sub> analyzers than guarantee a constant saturation up to 10gr of CO<sub>2</sub> per liter. Conductivity meters and Brix grades ensure consistent quality and consistent product.

CO<sub>2</sub> is obtained from combustion or fermentation processes. This gas must be purified to be in contact with foodstuffs. MachinePoint Engineering uses molecular filtration technologies to avoid contamination with flavors or other organoleptic changes, and also to eliminate benzene, xylene, ethanol, sulfur, etc.



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Our carbonators are easily integrated into continuous mixing lines, because they have a compatible standard automation. Electrical connections between computers are unnecessary. The carbonator and mixing line will run as a whole unit where de aeration, mixing, molecular filtration and carbonization take place in one single system.