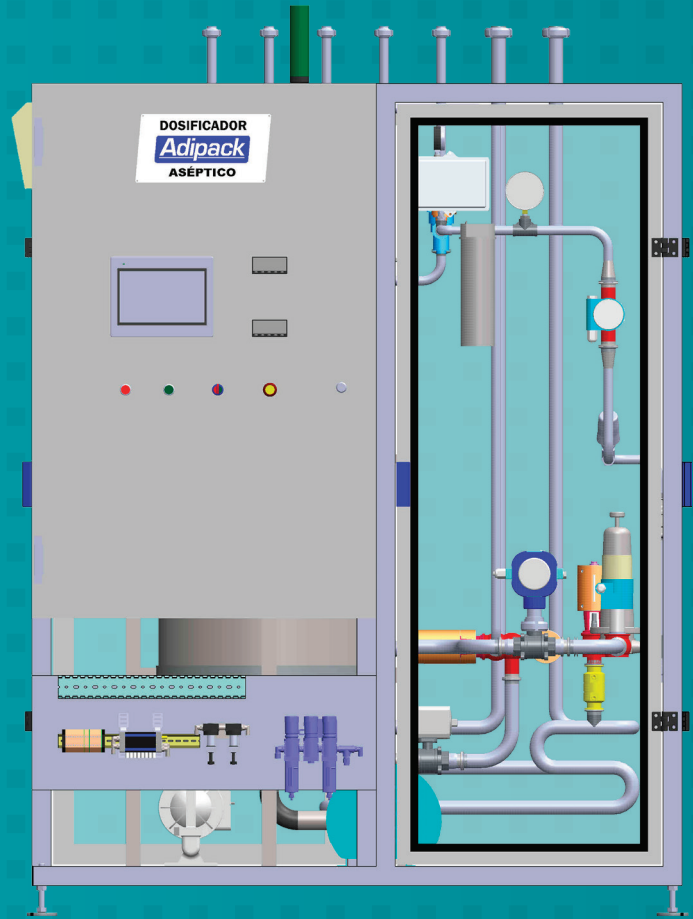




# ASEPTIC DOSING UNIT

## Enzyme (Lactase), for lactose free milk production



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## ASEPTIC DOSING UNIT ENZYME (LACTASE), FOR LACTOSE FREE MILK PRODUCTION

### UNIT FEATURES

The aseptic dosing unit is a device designed to sterilize ingredients to be dosed; which should not be subjected to high temperatures such as: enzymes, vitamins, aromas, salts, among others since it indicates the loss of their original properties. Thanks to this dosing system, it gives us a very important saving of ingredients and process time.

Efficient and safe operation thanks to the total automation of the processes by means of a PLC and HMI touch screen controlling the phases of washing, sterilization and production. In addition, it performs the integrity checks of the filter with the constant supervision of all its variables such as: levels, flow, filter pressure and steam barrier at the end of the line in the production phase; It also controls the entry of steam to prevent the filter from collapsing due to high temperatures in the sterilization phase. Also check pressure redundantly to prevent rupture of the aseptic filter for the ingredient.

### FUNCTIONING

- The operation principle of the aseptic doser in its production phase is to subject an ingredient (enzymes, vitamins, etc.) to a 0.2 micron aseptic filtration process. Prior to this process, the dosing unit must have complied with the CIP cleaning and SIP sterilization processes with steam at a minimum temperature of 121 ° C for 30 minutes.
- The ingredient (enzyme) is stored in a tank where it will be mixed later on with previously ozonated water in the balance or preparation tank with a capacity of 50 liters. This in order to make a more accurate dosage of the enzyme and thus avoid the maximum loss of this product. This mixture is made with recipes that can be selected from the touch screen, the ingredient is cooled by a thermal convection transfer and then a positive displacement pump with a variable flow rate between 5 l/h and 60 l/h takes the ingredient and forces it to go through a 0.2 micron filter to make the removal of bacteria and spores. Finally, the ingredient (enzyme) is dosed under aseptic conditions in the product line before the filler (after the UHT) through a mechanical valve that contains a static mixer being incorporated with the final product (milk) that is going to be processed.

