



## Tetra Pak® Aseptic Dosing unit E



### Application

Aseptic dosing of true solutions and suspensions containing particles smaller than 0.22 microns into aseptic systems. Examples of ingredient(s) that are suitable for aseptic dosing by a Tetra Pak® Aseptic Dosing unit E include: Enzymes, vitamins, aromas, flavourings, colourings and salt solutions, i.e. products not suitable for sterilisation by heat. The

Tetra Pak Aseptic Dosing unit E can also be used to achieve a sweeter taste in unsweetened milk products. Tetra Pak Aseptic Dosing unit E is fully automatic and can serve one or several fillers as well as an aseptic tank.

### Working principle

The ingredient(s) to be dosed is stored in the tank on the unit. This ingredient(s) is pumped through pre-filter to remove larger particles, then through a sterile filter to remove bacteria and spores and then continuously dosed under aseptic conditions into the main flow.

The ingredient(s) to be dosed is pumped by a positive displacement pump with speed control for accurate dosing. A flow transmitter controls the amount to be dosed and an aseptic valve cluster control the start and stop of dosing. The ingredient(s) is mixed into the main flow by a static in-line mixer

Tetra Pak Aseptic Dosing unit E unit can be connected at various stages to an aseptic process; downstream the steriliser in a UHT plant, upstream an aseptic tank.

The filter and entire pipe work, up to the dosing valve, are pre-sterilised before production by steam at 121°C for 30 minutes. After sterilization the unit is cooled down with air. After production a CIP (Cleaning In Place) is performed. Tetra Pak Aseptic Dosing unit E is equipped with an internal automatic CIP. A CIP sequence normally contains both caustic and acid cleaning.

The dosing process, pre-sterilization and CIP are supervised from the control panel. Tetra Pak Aseptic Dosing unit E control system is prepared for connection as a slave unit to a central control system, or other modules such as Tetra Pak® Aseptic Tank or filling machine.

# Tetra Pak® Aseptic Dosing unit E

## Basic unit

### Product model

- 85 l ingredient(s) tank equipped with an accurate level transmitter
- Positive dosing pump with frequency converter
- Flow measuring device
- Pre-filter
- Sterile filter, maximum pore size 0.22 micron
- Pressure transmitters before pre-filter and sterile filter
- Dosing valve arrangement
- Static in-line mixer
- Valves, pipe work, steam traps, temperature transmitters, internal electric wiring etc.
- Control panel with Allen-Bradley Compact Logix or Siemens S7 PLC system and Ethernet communication are included.
- Human Machine Interface (HMI) type TPOP

The unit is pre-assembled on a stainless steel frame and water tested in our factory before delivery.

All product-wetted parts are made of acid proof AISI 316 stainless steel. Frame and control panel cabinet are of AISI 304 stainless steel.

### Processing parameters

- Dosing range (l/h) 5-50 or 25-150

### Processing parameters

- Filters for air and steam
- Two freestanding pneumatic transport pumps for feeding concentrated acid/lye to the ingredient tank
- Uninterrupted Power Supply (UPS)
- Air cooler with compressor for control panel
- Communication with supervisory system via Ethernet
- Valve arrangement for automatic by-pass of the flow transmitter during CIP
- Automatic hot water set for the CIP including CB unit and steam control valve
- Cooling jacket on the ingredient tank
- Frequency controlled magnetic mixer for gentle agitation of the ingredient(s)

## Technical data

### Approx. consumption data

Steam (3 bar)	10 kg/h
Rinsing water (3 bar)	200 l/h during CIP rinsing
Instrument air (6 bar)	5 NI/min
Electricity (380V/50Hz)	1,9 - 2,1 kW
Ice-water* (1 bar, 2°C)	100 l/h during production
Foot print	2 100 x 700

\* Optional only when Option 35, Cooling jacket on the ingredient tank, is selected.

### Shipping data and dimensions

Net weight, kg	300
Gross weight, kg	600
Volume, m <sup>3</sup>	6,8
Length, mm	2 400
Width, mm	1 200
Height, mm	2 400

