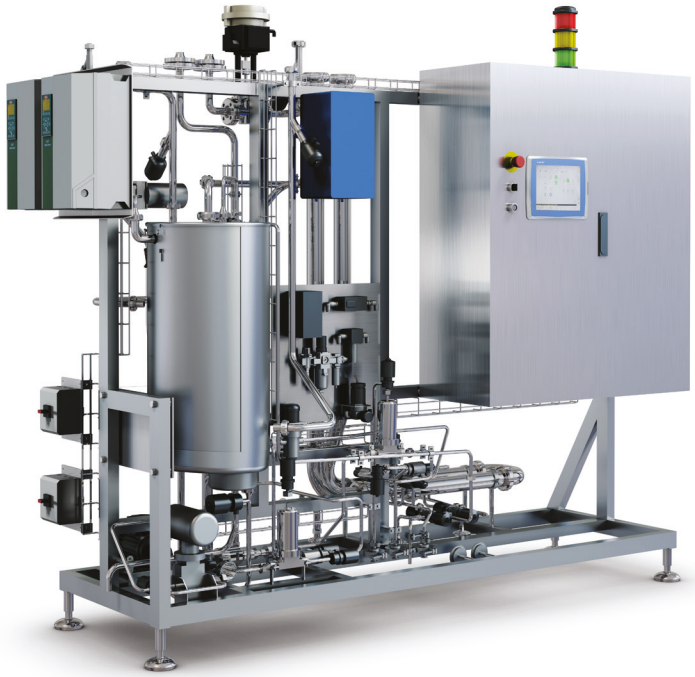
Tetra Pak®
Aseptic Dosing unit E



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) 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.

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 in stainless steel, including process controller (PLC) in Rockwell or Siemens and solenoid valves
- Human machine interface (HMI) type industrial PC

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

SELECTION OF OPTIONS

- 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 arrangment 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 Nl/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, m³	6,8
Length, mm	2 400
Width, mm	1 200
Height, mm	2 400