

Tetra Pak® Aseptic Dosing unit F



APPLICATION

Tetra Pak® Aseptic Dosing unit F provides flexible and safe in-line ingredient delivery. Examples of ingredients that are suitable for aseptic dosing by Tetra Pak® Aseptic Dosing unit F include: enzymes, aromas, colours, lipids, probiotic bacteria and other nutritional. The system ensures the survival and stability of heat sensitive function that the characteristics of the ingredients are not changed. It fits with any filling machine with a capacity between 1 000 – 20 000 l/hr with a continuous flow. The Tetra Pak® Aseptic Dosing unit F is fully automated and installed between processing and the filling machines. It can serve one or several filling machines.

WORKING PRINCIPLE

The ingredient is injected into the base product with high precision after the final heat treatment, just before the filling into retail container.

The pump section has two identical stations that enable either single or double dosing depending on capacity and number of ingredients injected. Each station can dose 0.5 l/h to 15 l/h of ingredient. A flow meter and a bar code reader ensure the correct dosage level and product.

The dosing is made through a sterile hose connected to the bag and a sterile needle injects the ingredient into the base product. Steam and sterile condensate barriers maintain the aseptic condition during the process. The liquid ingredient is pre-packed through an aseptic process and kept in 5 or 10 litre bags, which are ready to use. Tetra Pak® Aseptic Dosing unit F is equipped with an advanced information system that provides total traceability. The unit does not have a CIP and sterilization system by itself but follows the process cleaning and sterilisation process. Tetra Pak® Aseptic Dosing unit F is controlled via its operator panel.

BASIC UNIT

VERSIONS

- FDU 2000 for UHT applications
- FDU 2000C for Chilled applications

MAIN COMPONENTS

- Injection chamber with steam and sterile condensate barrier (aseptic version)
- Injection chamber (chilled version)
- Two dosing stations with peristaltic hose pumps and weighing system
- Flow transmitter
- Valves, pipe works, steam traps, filters, temperature transmitter, pressure gauge, internal wiring etc.
- Control cabinet with Beckhoff PLC system and automation
- Human Machine Interface (HMI), type industrial PC mounted in control panel with 12" touch screen in control panel door. Including recipe management system and production record system

OPTIONS

- Product cabinet cooler
- Higher base product capacity (allows higher product flow than standard 20.000 l/h)

TECHNICAL DATA

PROCESSING PARAMETERS

Base product

Type	Liquid
Flow (l/h)*	1 000 - 20 000
Max pressure (kPa)(g)	170
Max pressure variations (kPa)(g) (in order to reach dosing accuracy)	±20

* Bigger base product flow as option

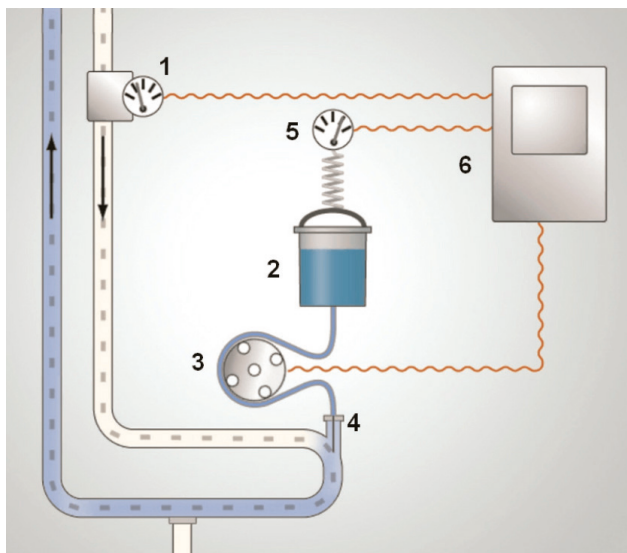
Ingredient

Type	Liquid
Package size, litres per bag	5 or 10
Dosing range continuous (l/h)	0,5 - 15
Dosing range intermittent (l/h)	1,0 - 30

Shipping data and dimensions*

Net weight, kg	350
Gross weight, kg	550
Volume, m ³	3,3
Length, mm	1 300
Width, mm	700
Height, mm	2 270

* Options not included



FLOWCHART

- 1. Flow meter:** Measures base product flow
- 2. Ingredient:** In aseptic bag
- 3. Hose & pump:** Ingredient is transferred from the bag via a hose and peristaltic pump
- 4. Injection point:** Where the ingredient is dosed into the product
- 5. Consumption measurement:** The consumption of the ingredient is measured by a load cell
- 6. Control panel:** Recipe control, accurate dosing and traceability