



Tetra Alfast[®] Plus

Direct In-line standardisation



Tetra Alfast Plus is designed for automatic in-line standardisation of the fat, SNF and protein content in milk and cream direct after milk separation for dairy products including; low and high fat market milk, market cream, flavoured milk, cream for butter making, milk for fermented products and power production, cheese milk, whey, ice-cream mix, formulated products and functional foods.

Working Principle

By continuously controlling the back pressure of the separator cream outlet in a Cascade Control System, an accurate fat content is achieved, regardless of variations in the raw milk fat content. The raw milk is separated in the separator where the skim milk pressure is kept constant by a constant pressure-modulating

valve. A flow transmitter measures the cream flow from the separator and the fat content is calculated from a temperature compensating density transmitter. Another flow transmitter measures the flow of standardised milk.

On receiving signals from the transmitters, the computer in the control panel calculates the fat content, in relation to set points and flow rates, and then transmits control signals to the cream flow modulating valve, thereby controlling the fat content, whenever required.

All models have a surplus cream line that is used for regulating the flow rate of remix cream into the skim milk line, thereby standardising the milk

Base unit

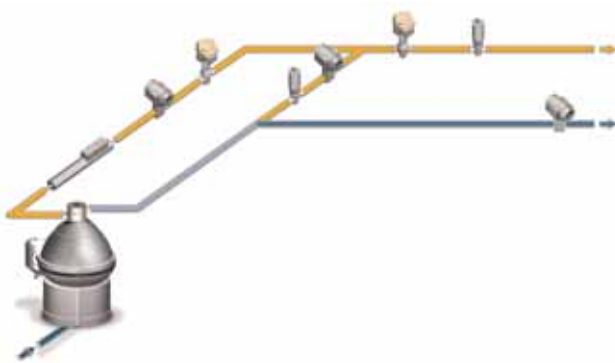
Product model

- Density and flow transmitters
- Control-, change-over-, non-return and sampling valves
- Pressure gauge
- Control panel in stainless steel with ABB SattLine control system
- Human Machine Interface, touch screen mounted in control panel
- The unit is prepared for remote operation
- Technical documentation
- All internal wiring and piping
- All components pre-assembled on a stainless steel frame

Selection of options

- Automatic calibration for SNF variations
- Ratio control between fat/protein or fat/SNF
- Skim milk removal
- Partial by-pass of separator
- Cold milk standardisation, 6-12°C
- In-line sensor for measuring final product composition
- Additive to milk and cream for adding ingredients
- Vitamin dosing
- SpotOn technology for automatic in-line compensation for mix zones, separator discharge and managing filling and circulation of pasteuriser
- OneStep integration
- 3A version
- Mix-proof valve
- Communication with supervisory system

Basic flowchart for Tetra Alfast Plus



Production of fat standardised cream and milk
Note: Separator not included in Tetra Alfast delivery

- UPS, uninterrupted power supply
- Air cooler with compressor for control panel
- Digital paperless recorder

Processing parameters

Raw milk flow rate, (l/h): 5 000 - 75 000

Hot milk standardisation temperature, (°C): 45-65

Consumption data

Power consumption*, (kW) 0,5

Instrumental air, 600 kPa, (NI/min) 200

* Voltage 200-400 VAC, 1-phase (max variation ±5%), frequency 50/60 Hz

Dimensions*

Height, (mm) 2 200

Width, (mm) 1 275

Length, (mm) 1 470

*Options not included

Shipping data*

Net weight, (kg) 370

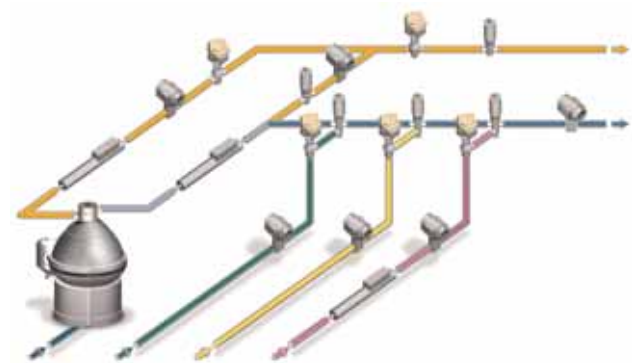
Gross weight, (kg) 720

Volume (m³) 8,7

*Options not included

Environment

- Tetra Alfast is built in a modular design, which makes them easy to rebuild and adopt to new duties
- Tetra Alfast consists of parts that can be separated for recycling purposes



Production of fat and protein standardised milk