

## Milk/Cream Standardization Unit for Dairy Industry

### THE PRODUCT

MILKOTUNE is a unit for milk standardization: automatic, self-regulating, for continuous, in-line processing after the milk skimming separator.

### APPLICATION

MILKOTUNE has been designed by HAUS for the dairy industry, specifically for regulating the fat content in milk and cream. The purpose is the standardization of milk: producing milk with a fat content precisely according the market and regulatory demands. MILKOTUNE detects how much cream is necessary to add to the skimmed milk to obtain the desired final value of fat in the milk, and subsequently executes a precise dosage of the necessary cream amount.

MILKOTUNE is additionally able to set and keep stable the fat content in the cream produced by the separator.

### SPECIAL FEATURES

Automated milk/cream standardizer is a fully automated standardizing system designed for continuous standardization of milk/milk cream working in conjunction with a separator. MILKOTUNE consists of a regulating unit, a fat analyzing unit and a plc microprocessor that controls the standardizing process.

Fat content of the incoming milk is automatically analyzed and the microprocessor automatically controls the fat content of the standardized milk and standardized cream.

CIP of the automatic standardizer is integrated with the CIP of the pasteurizer and cream separator.

THE AUTOMATIC STANDARDIZER CONSISTS OF,

- 3 MASS TYPE FLOW AND DENSITY SENSORS
- 2 REGULATING VALVES
- 2 ALFA LAVAL SSV CHANGE-OVER VALVES
- 1 SET OF STAINLESS STEEL PIPING
- 1 STAINLESS STEEL CONTROL PANEL

CONTROL PANEL INCLUDES;

- SIEMENS S7-1511 PLC
- I/O UNIT
- DIGITAL AND ANALOG INPUT/ OUTPUTS
- TRANSMITTERS FOR FLOWMETERS
- NECESSARY POWER SUPPLIES, TERMINALS, SCREWED CONNECTIONS AND FUSES.
- SIEMENS 9" OPERATOR PANEL

AUTOMATIC STANDARDIZER IS ASSEMBLED AS A UNIT ON A STAINLESS STEEL SKID AND TESTED IN OUR FACTORY.

### APPLICATIONS

- Milk fat
- Cream fat
- Standardization

### HIGHLIGHTS

- Hygienic Design
- Working Mode
- Stability Instrumentation
- Expert Software
- CIP Ready

## Milk/Cream Standardization Unit for Dairy Industry

### Technical Information

Capacity: 5.000 L/H- 20.000 L /H

Product: Whole Milk (Cows)

Fat Content: %3,2-3,8

Duty: Automatic Continuous Standardization Of Milk/Cream Fat Content

Source Product: Skim Milk Incoming From Cream Separator, Fat Content: 0,05% Or Lower

Cream Incoming From Cream Separator

Output Product: Standardized Milk From 1% Up To Whole Milk's Fat Content 0,2 % Less

Surplus Cream With 30-40 % Fat

Standard Deviation: For Standardized Milk Flowrate:  $\pm 0,15\%$  (The Deviation Is Calculated For Fat Content Of Minimum 45% In Cream.)

### OPERATING CONDITIONS

MILKOTUNE must have constant flow and pressure to maintain the accuracy of the standardization process. while the pressure is dependent on the capacity of the separator, the separator skim milk outlet pressure must be between 3-6 bar(g).

The compressed air supplied to the milkotune standardizer should be dry and oil-free with pressure between 4-6 bar(g). the compressed air inlet of the standardizer will be equipped with air pressure regulating valve. Constant feeding from the cream separator is essential for milkotune standardizer measurement and output sensitivity. performance of the standardizer is dependent with milk quality and fat content, with seasonal changes in milk quality and fat content, recalibrations of standardizer might be needed. cream line mass flowmeter : available

### P&ID

1- CUSTOMER

2- HAUS

