STI Flows Ltd

Milk Reception Catalogue | Hygienic Intake, Separation, Clarification and Homogenisation Solutions



Milk Reception System Overview

The STI Flows Ltd milk reception system is designed for hygienic, accurate and efficient intake of raw milk from farm tankers or collection vehicles. The system supports unloading, filtration, air removal, flow measurement, chilling, storage and transfer to downstream pasteurisation, separation, clarification and homogenisation processes.

Key Benefits

- Hygienic stainless-steel construction suitable for dairy processing environments.
- Accurate intake measurement using flow meter or weighing options.
- Inline filtration to remove coarse particles before storage or processing.
- Optional deaeration to improve measurement accuracy and product handling.
- Configurable integration with cream separator, clarifier, homogenizer and pasteurization plant.
- CIP-ready design for fast cleaning, reduced downtime and food-safety compliance.

System Components

Component	Description
Milk Reception Unit	Skid-mounted intake system for receiving raw milk, with sanitary pipework, valves, control options and connection points.
Self-Priming / Centrifugal Pump	Transfers milk from tanker to filter, meter, cooler and storage with smooth, hygienic product handling.
Inline Filter / Strainer	Removes visible foreign matter and protects downstream dairy equipment.
Flow Meter / Weighing System	Measures received milk volume or weight for traceability, stock control and procurement records.
Plate Heat Exchanger	Rapidly cools incoming milk before storage or prepares milk for pasteurisation duty.
Raw Milk Storage Tank	Insulated stainless-steel tank with agitator and CIP connections for safe chilled holding.
Cream Separator	Separates raw milk into cream and skim milk for standardisation or cream production.
Milk Clarifier	Removes fine sediment and impurities to improve product cleanliness before heat treatment.
Homogenizer	Reduces fat globule size to improve product stability, texture and appearance.
Control Panel	Central control for pumps, valves, level signals, safety interlocks and operational monitoring.

Process Flow Diagram

Raw Milk Tanker → Sampling & Quality Check → Reception Pump → Inline Filter → Flow Meter / Weighing → Plate Cooling → Raw Milk Storage Tank → Cream Separator → Clarifier → Homogenizer → Pasteurization Plant → Finished Milk Holding / Packing

Typical Applications

- Pasteurised milk production lines.
- Raw milk reception and chilled storage areas.
- Milk standardisation with cream separation.
- Clarified milk feed to pasteurisation systems.
- Homogenised milk, flavoured milk and dairy beverage preparation.
- Small, medium and large dairy processing plants.

Standard Design Features

- Product-contact parts in dairy-grade stainless steel.
- Sanitary valves, fittings and hygienic pipework.
- CIP-compatible layout for cleaning of pipelines, tanks and processing components.
- Modular configuration to match required capacity and plant layout.
- Manual, semi-automatic or automatic operation available.
- Designed for integration with existing or new pasteurisation plants.

Indicative Technical Specification

Parameter	Typical Option
Capacity Range	Customised to project requirement, from small dairy lines to industrial reception systems.
Material	Stainless steel construction for hygienic dairy service.
Milk Intake	Tanker connection, reception vat or collection tank configuration.
Measurement	Flow meter, weigh bowl or load-cell based weighing option.
Cooling	Plate heat exchanger with chilled water or glycol system.
Automation	Manual controls, PLC panel or touch-screen HMI available.
Cleaning	CIP-ready pipework, tanks and process modules.
Downstream Integration	Separator, clarifier, homogenizer, pasteurizer and storage systems.

Why STI Flows Ltd?

STI Flows Ltd provides practical dairy processing solutions focused on hygiene, reliability and process efficiency. Each milk reception package can be tailored to the customer's intake capacity, product range, available utilities, automation level and future expansion plans.

Quotation Information Required

- Required milk intake capacity per hour and per day.
- Milk arrival method: tanker, cans, reception vat or mixed intake.
- Required automation level and control panel preference.
- Cooling medium available: chilled water, glycol or ice water.
- Need for cream separator, clarifier, homogenizer and pasteurization system.
- Available plant layout, utilities and installation location.