MachinePoint®
Food Technologies

Milk Reception Units

Gémina©

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Milk Reception Units

APPLICATIONS

Dairies have special milk receiving areas to control the entry of the milk coming from farms.
The first task to undertake in the milk reception units is to determine the amount of milk coming in. This value is introduced and registered in the automation system, to use it for weight control and compare compare the weight of the milk coming in and the final processed milk coming out.

HOW IT WORKS

This method uses a **flowmeter**.
The flowmeter has the inconvenience that it registers the air in the milk as well as the milk itself, so the results are not very reliable.

The installed flowmeters can be of two types, differentiated by its accuracy and price; on one side the **magnetic flowmeters** are a cheaper option compared with **mass flowmeters**, which are much more accurate but they require fastening and isolation from tubes to avoid vibrations, which would affect the measuring process.

It's important to prevent the entry of air together with the milk flow, in such a way that all milk coming in will be free from air and thus avoid inaccuracies in the volumetric measurement of the incoming milk flow.

Milk is supplied to factories with different amounts of dissolved air, as an average, it could be considered that the amount of air in volume ranges from **5,5** to **7%**.

For this reason, it is essential the installation of a **de-aerator** before the flowmeter.

The pump starts when the control equipment notices the milk in the de-aerator has reached the set value required to prevent air dissolution.

In the same way, the pump stops as soon as the milk level falls below a certain level.

After the measuring process, the milk goes through a filter to remove impurities and then is pumped into the **storage tank** (silo)..

The milk receiving unit must be placed at a lower level than the outlet pipe of the truck's deposit, so that the product is transferred by gravity and it doesn't need to be pumped to the deaerator.

CHARACTERISTICS

- Mounted and compact unit which contains **deaerator**, **flowmeter**, **pump** and electric panel with **PLC** control and **HMI** screen.
- Hygienic design: Areas in contact with product made of **AISI 316** steel and the rest made of **AISI 304** steel.
- **FDA**-approved materials.

ADVANTAGES

- Accurate measurement and control.
- The included deaeration method implies an improvement in quality of product and in accuracy in the control of incoming product.
- Long-running non-stop cycles
- Continuous operation
- Easy to install.

MODELS

Model	Output litres/hour	Product	System	Measuring system	Thrust	Automation
MLK-RE-/1000-B	1000	Milk	Cyclone, +Centrifuge	Magnetic	Centrifuge	Manual
MLK-RE-/5000-B	5000	Milk	Cyclone, +Centrifuge	Magnetic	Centrifuge	Manual
MKL-RE-/10000-B	10000	Milk	Cyclone, +Centrifuge	Mass	Centrifuge	PLC
MLK-RE-/15000-B	15000	Milk	Cyclone, +Centrifuge	Mass	Centrifuge	PLC

GÉMINA designs any custom model based on the needs required by the client.

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MACHINEPOINT FOOD TECHNOLOGIES was created as a result of a joint-venture between MACHINEPOINT GROUP and **GÉMINA.**

MACHINEPOINT FOOD TECHNOLOGIES designs, manufactures and integrates lines, equipment and processes for the food industry, more specifically for the beverage processors, the dairy industry and processors of fruits and vegetables.

MACHINEPOINT FOOD TECHNOLOGIES belongs to an international group specialized in industrial equipment for plastic, packaging and food industries.

The group is headquartered in Spain (Valladolid) and has sales offices in Turkey, Mexico, France, India and North Africa. The engineering center is also located in Spain (Murcia). It is at the engineering center where we manufacture our equipment and have our R & D + I department.

GEMINA PROCESOS ALIMENTARIOS S.L. is a leading equipment manufacturer that provides innovative solutions for the food industry. It has over 25 years experience in designing, manufacturing, assembling, automating and implementing lines and processes.

Headquarters - Europe
Parque Tecnológico de Boecillo
Edificio C.E.E.I. 2.01
E-47151 Valladolid - España
Tel: +34 983 549 900
Fax: +34 983 549 901
Email: foodtechnologies@machinepoint.com

Engineering Center - Europe
Polígono Industrial Los Romerales
Parcelas 3 y 4
30520 Jumilla - Murcia - España
Apartado de Correos 231
Email: foodtechnologies@machinepoint.com

India
39, Rajdhani Bungalows,
Near Ramwadi, Isanpur Road
Ahmedabad - 382 443
India
GSM: 0091 997 997 5617
Tele/Fax: 0091 79 65492585
Email: india@machinepoint.com

North Africa
71, Rue Jilani Marchand 2034 Ezzahra
Ben Arous
Tunisia
Tel: +216 98 31 14 90
Tel/Fax: +216 79 48 45 21
Email: africa@machinepoint.com

Turkey
Tel: +90 212 414 27 49
GSM: +90 554 577 2166
Email: turkey@machinepoint.com

France
Tel: +33 975 181 356
Email: france@machinepoint.com

Mexico
Tel: +52 442 348 6609
Email: mexico@machinepoint.com