












**“G. M. COSTIN” DAIRY PILOT PLANT
RE-SPIA PROJECT**

Fully automated line for milk processing: PLC (Programmable Logic Controller) system and CPU (Control Process Unit –with Industrial Ethernet and MPI), individual control and command In/Out for each unit		
No.	Description	Picture
1.	<p>Description</p> <p>Module for milk reception with filter, storage tank of 600 L capacity, inline filter for foreign bodies` removal, plate heat exchanger for milk cooling of 400 L/h capacity, two centrifugal pumps, flow meter, interblockation panels for commutation to CIP (cleaning in place) in /out.</p> <p>Applications</p> <p>The reception unit makes the transfer of milk from insulated road tankers into the reception unit, and after cooling it down to 2-4°C, milk is stored in a bulk tank (max. 600 L).</p>	
2.	<p>Description</p> <p>Module for milk pasteurization (400 L milk/h capacity) with: plate heat exchanger with four sections, balance tank (30L capacity), two integrated holding tubes (30 sec and 330s), two centrifugal pumps, divert valve for milk recirculation, by-pass valves, manometers, flow-meters, temperature recorders, hot water generator, <i>in line</i> with cream separator and homogenizer. The unit is controlled by touch screen panel.</p> <p>The module is sanitized by a CIP unit</p> <p>Applications</p> <p>Designed for HTST milk pasteurization and pasteurization at high temperature (i.e. 90°C/5 min)</p>	

<p>2.1</p>	<p>Description</p> <p>Cream separator</p> <p>Applications Milk cream separation</p>	
<p>2.2</p>	<p>Description</p> <p>Homogenizer (working pressure: 200 MPa/150 MPa)</p> <p>Applications Two steps milk homogenization of preheated milk</p>	
<p>3</p>	<p>Description</p> <p>Module for fermentation (3 tanks x 200 L capacity) for inoculation, fermentation and cooling, with agitators and mantel for cold/ hot water circulation. Tank for cream pasteurization and fermentation - 100 L capacity with mantel for cold/ hot water circulation. The module is sanitized with the CIP unit.</p> <p>Applications Fermented milks (yoghurt, sana, sour cream) and cream.</p>	

4	<p>Description</p> <p>Packaging machine (type AR 62 R) in preformed PS plastic cups(ϕ 75 mm capacity) with aluminum lid and date writing system, capacity 2000 cups/h</p> <p>Applications Fermented milks packaging.</p>	
5	<p>Description</p> <p>CIP unit with three tanks (lime, acid and rinsing water) for <i>in line</i> washing of equipment, road tankers, pipes.</p> <p>Applications Sanitation of milk processing line</p>	
6	<p>Description</p> <p>Cheese vat -300 L capacity with mantel for cold/hot water circulation, stirring tools and cutting blades for coagulum cutting.</p> <p>Applications Milk clotting and cutting coagulum</p>	
6.1	<p>Description</p> <p>Trolley table (200L) for coagulum transfer with sieve for whey drainage and hydraulic pressing system</p> <p>Applications Cheese manufacturing</p>	

7	<p>Description</p> <p>Vacuum packaging unit type VP 860 Sin PE bags of max. 420 x 600 mm</p> <p>Applications</p> <p>Cheese packaging in PE bags</p>	 A stainless steel vacuum packaging unit, model VP 860, featuring a digital display and control panel on the front. It is designed for packaging items in PE bags up to 420 x 600 mm.
8	<p>Description</p> <p>Butter churn- capacity 30-32 L of cream</p> <p>Applications</p> <p>Butter making</p>	 A stainless steel butter churn with a capacity of 30-32 L of cream, mounted on a metal stand. It is used for butter making.