Mecatherm bakery line

Mecatherm bakery line is used for production of bread products such as: French Rolls, Rolls, hot dogs, baguettes and half baguettes. The whole process is starting from the same beginning of putting ingredients to final product which after baking is frozen. The line includes all machines which are listed below.

	Machine	**Bakery line**
1	Producer	Mecatherm SA, 67130 Barembach
2	Type	Megaline
3	Serial number	All machines has their own serial number
4	Production year	All machines has been made in 2011
5	Efficiency [pcs/hour]	Up to 5000 pcs – hot dogs and french rolls; 4000 for baguettes
6	Maximum length of line	120 meters
7	Weight of products	40 – 540 grams
8	Power supply	Electric 220V and 3x400V; Gas
9	Power of gas burners	320 kW

Megaline consists of the following machines and devices (specification in accordance with the order settings in the production line), please see below.

	Machine	**Machine for making dough**
1	Producer	Sasib Bakery Holland
2	Type	Petrin Continu
3	Serial number	11/0235
4	Production year	2011
5	Dimensions- approximate	6m x 6m x 6m
6	Power supply	230V; 3x400V
7	Construction	steel frame, 2 platforms (bottom and top), hopper, 5 tanks (various capacities) with mixers (different types), conveyors, 6 electric motors (various powers), control cabinet, control panel
8	Purpose and principle of operation	The dough making system consists of a flour dispenser, stirrer and dough bowl. The process of preparing the dough ingredients in the programmed proportions and their thorough mixing takes place here. In addition, at this station there is a control panel for the whole production line.

Picture 1. Machine for making dough

	Machine	**Machine for dividing the dough**
1	Producer	Mecatherm
2	Type	DOHC
3	Serial number	45.07
4	Production year	2011
5	Dimensions approximately	2m x 1m x 1,8m
6	Weight of products	200 – 800 grams
7	Power supply	230V
8	Construction	self-supporting frame with stainless steel plates, conveyor belt, chain-controlled mechanism, 2 electric motors, steel funnel, 4 wheel supports, 2 knives returnable preventing the dough from returning to the tray, 2 divided chamber / piston assemblies, lifting device for feeding pieces of dough on top of the dough forming conveyor line
9	Efficiency	1400 to 5000 round per hour, can be regaulated
10	Purpose and principle of operation	The device is designed to divide the dough into pieces, which previously it was prepared in the mains and fed to the line forming a cake. It is filled with a large piece of cake, and the separator ensures proper portioning of the dough into cylindrical pieces. It is controlled by one control box coupled together with a dough line, a puller and a lifting device.

Picture 2. Machine for dividing the dough

	Machine	**Dough forming line**
1	Producer	Mecatherm
2	Type	TC
3	Serial number	33.06
4	Production year	2011
5	Dimensions approximately	8m x 1,5m x 4m
6	Product weight	200 – 800 grams
7	Power supply	230V
8	Construction	steel frame, 1 platform (bottom), stacking equipment, conveyor belt 6-horizontal shelvs driven by one chain with a width of tape 500 [mm], device for applying dough to trays, both sides of the sliding plexiglass door
9	Efficiency	24 000 pcs/hour
10	Purpose and principle of operation	The device is intended for forming dough and putting the dough on the trays. Forming takes place through the process of applying to many conveyors earlier separated dough and moving it. Divided pieces of cake rest on 7 overlapping tapes. These tapes are adjustable depending on the size of the product. The dough is transferred from one tape to another. The conveyor belts are controlled by one coupled control box together with the dough divider, the puller and the lifting device

Picture 3. Dough forming line

	Machine	**Automatic storage facility with top conveyance using an electric pusher**
1	Producer	Mecatherm
2	Type	TFP 40-2-07
3	Serial number	24.21
4	Production year	2011
5	Dimensions approximately	17m x 4,5m x 7m
6	Efficiency	384 plates/hour
7	Power supply	3x400V
8	Construction	steel frame, a transmission mechanism built from 6 modules o width 2.4 [m] and length 1.8 [m], 64 trays per module, 32 trays per stack (up or down), an isothermal casing made of tin-polyurethane panels with a thickness of 100 [mm], an air-conditioning system guaranteeing the right temperature and humidity of the air while dough packing. Each module has a separate one air conditioning unit. Humidity is regulated in an automatic steam valve. Control system - Siemens.
9	One round time	1 hour 56 minute
10	Purpose and principle of operation	The device is designed for dough cake (rising), which is an integral process in the production of bread. The dough in the trays is delivered by a roller conveyor from the line forming a dough and subjected to a process of garnishing (growing) dough that lasts a certain time depending on the type of dough. As the cake will grow it goes to the device that cuts the cake.

Picture 4. Automatic storage facility with top conveyance using an electric pusher

	Machine	**Carousel oven**
1	Producer	Mecatherm
2	Type	TRM
3	Serial number	23110467
4	Production year	2011
5	Dimensions approximately	11m x 3,5m x 5m
6	Efficiency	112 trays/hour
7	Power supply	3x400V / gas
8	Construction	Frame and body made of stainless steel, 3 modules - each heated through 2 gas burners. Trays are carried in every module by carousel in a continuous manner in the form of a carousel (top and down). The device is controlled by Siemens control.
9	Purpose and principle of operation	Baking rolls etc.
10	One round time	Up to 22 minutes

Picture 5. Carousel oven

	Machine	**Freezer with carousel conveyor**
1	Producer	Mecatherm
2	Type	TRP 32-1-06
3	Serial number	73.34
4	Production year	2011
5	Dimensions aproximetly	11m x 6,5m x 6m
6	Efficiency	240 trays / hour
7	Power Supply	3x400V
8	Construction	Chamber thermally insulated, carousel driven chain transmissions, 10 fans, 10 spiral coils refrigeration, Siemens control cabinet
9	One round time	Up to 48 minutes
10	Purpose and principle of operation	The device is designed for automatic, continuous, deep freezing of finished products. Freezing baked dough allows for storage and transport finished product without losing food values. Frozen cake after the freezing process is delivered by a conveyor belt for automatic dough ejector

Picture 6. Freezer with carousel conveyor

	Machine	**Automatic dough ejector**
1	Producer	Mecatherm
2	Type	MPII
3	Serial number	73.34
4	Production year	2011
5	Dimensions aproxximetly	8m x 1m x 1,5m
6	Power supply	240V
7	Construction	Pre-ejector: a vibrating device placed on an independent conveyor, device for stopping trays in the ejection position, device for removing products, receiving tape
8	One round time	Up to 48 minutes
9	Purpose and principle of operation	The device is mounted on the frame of the conveyor belt. It is used to recover sheets in which a finished product is found.

Picture 7. Automatic dough ejector