

RECP Best Practice Catalogue

*New conveyor belt for loading
finished products*

Developed within the framework of MED TEST II



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION



The SwitchMed Programme is
funded by the European Union

Best Practice - New conveyor belt for loading finished products

SECTOR: Food & Beverage

SUBSECTOR: Manufacture of dairy products

PRODUCTS Milk, fermented milk (L'ben), milk curds (Raïb), butter, crème fraiche, Smen

CATEGORY Process control or modification

APPLICABILITY Process

COMPANY SIZE 158



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Description of the problem (Base scenario):

At present the outgoing packets from the packaging machines are loaded into boxes of 10 containers, these containers are then sent by a first conveyor to the cold room for unloading and stacked 5 to 8 containers high. The latter are transported by hand trucks to a second conveyor which ensures loading on truck. At this point, the stacks cannot be loaded in this state, the handlers unpack the containers at the end of the second conveyor and re-stack them on the delivery truck. These handling operations tend to cause the piercing of the bags by the containers. The examination of customer returns has shown that 65% of the damage is due to these piercings.

Description of the Solution

The company's management has decided to eliminate the existing conveyors and to invest in a new conveyor which transports the containers from the exit of the filling machines to the delivery truck, eliminating two handling operations out of the three current ones.



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Economic Benefits

The MFCA has shown that the unrecoverable damage (customer returns) is 545,383 litres/year or a total loss of 115,366 €/year.

65% of this damage is caused by handling operations, which is 75,000 €/year. The new conveyor can reduce these losses by 50% because it eliminates half of the handling operations (if we take into account how the customer handles the product).

The savings that can be realised can be as much as 37,500 €/year. Additionally, this new line allows a productivity gain of 20%.

Environmental Benefits

There is a reduction of the COD of the liquid effluents of 220 g of O₂/litre of milk x 272,691 litres = 60 tons of oxygen COD/year, which is 16.7% of the current polluting load.

Savings on polyethylene packaging waste from:
5.8 g/litre x 272,691 litres = 1.58 tons/year

A positive impact because of the reduction in handling operations

Health and safety impact



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Capital investments & financial indicators	Investment: 52, 500 € Return on Investment 1.4 year
Suppliers	Local suppliers
Other aspects	No technical barriers, client satisfaction (less damage)
Implementation	



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