

# FOOD

- ✎ More efficient drying times
- ✎ Consistent, high product quality
- ✎ Same production climate all year

## Controlled climate

There are many benefits to be had from dry air when producing, drying and storing many foods. DST provides flexible dehumidifiers which can be customised to guarantee exactly the right climate.

## Dry products

When manufacturing or storing dry products such as soups or broths, it is important to dehumidify the premises as the ingredients might otherwise clump together when being mixed or in their packaging. This assures production quality and allows the same production rate to be maintained all year round.

## Spray towers and pneumatic conveyor systems

The main air can ideally be predried when drying products in spray towers (and also fluidised beds). This prevents seasonal variations in production capacity. The product is cooled in a cooling stage before being packed; rehumidification of the product is prevented if the cooling air is dried.

Air used in pneumatic systems can be dried in order to prevent rehumidification and conveyor blockages. If the air is not predried, there is a risk of rehumidification of the dried powder when it is cooled.

## Storage of cheese for ripening

When storing cheese for ripening, maintaining temperature and humidity levels within tight tolerances is important to the quality and flavour of the cheese.



## Drying

When drying food, a higher, more consistent level of quality is achieved if drying takes place at lower humidity levels. This enhances the quality and retains even more of the flavour.

## References

*Cadbury, Monks Hill, Pontefract. British Sugar, Mars, Nestlé, Kraft Foods, Malaco Leaf, Milko, Arla, Norrmejerier, Danisco Sugar, Kraft General Foods, Cykoria S.A., Unilever GmbH, Thayngen, Knorr AG, Mars AG, Cloetta Fazer Suklaa OY.*

Example of installation

# Cheese production in Slovakia

MILEX is a traditional Slovak dairy company that has been manufacturing dairy products for 30 years now. Among other things, the company manufactures cheese slices for fast food outlets and restaurants. These products are made by pouring 1.5 mm of soft cheese onto a cooled cylinder at a temperature of 8 °C, which cools the cheese. The product is then cut to the correct size.

## Problems with condensation

Condensation readily forms on cold surfaces if the air which comes into contact with the surface has a dewpoint above the temperature of the cold surface. During cheese slice production, condensation formed on the cylinders which caused the cheese to fall off. Condensation can increase the risk of bacterial growth.

## A custom dehumidifier system

To be able to guarantee the production of cheese slices, a dehumidifier was installed to control the dewpoint on the premises, ensuring that it is always lower than the outer temperature of the cooling cylinder.

This prevents condensation and stops the soft cheese from falling off the cylinder.

## Bactericidal SSCR-H rotor

This dehumidifier was also fitted with an SSCR-H rotor. The SSCR-H is a sorption rotor which both eliminates bacterial and effectively prevents further bacterial growth. The surface is impregnated with silver. SSCR-H has an effective drying depth and has been developed mainly for the food and pharmaceutical industries.

## Excellent results

After installing the DST dehumidifier, MILEX achieved the required climate at its production plant. As a minimum, the company needed to achieve 18 °C/40 % RH, but before production started the room was at just 6 % RH and attained a maximum 8 °C/30 % RH during full production, with the moisture load from ten people and boxes of hot, melted cheese. Thanks to our dehumidifier installation, MILEX is now protected against unnecessary production stoppages.



Installed RZ-071 unit with EH-3 control at MILEX cheese factory, Slovakia.



Cheese production at MILEX.

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