Travaglini

EQUIPMENT FOR **FERMENTING AND AGING OF SALAMI**

Since 1950, **Travaglini S.p.A. has been the leading company in the manufacturing of drying, smoking, and fermenting equipment for salami, thanks to the experience that we have acquired through cooperation with the world's most important cured meat producers.**

Our technologies, together with skills of our experts, support the customer in any problem connected to drying of salami in all their specific applications. Specifically:

Better fermentation control

Thanks to the combination of the installed cooling and heating power, it is possible to remove a noticeable amount of water from the product during the first hours of the fermenting process even at relatively low temperatures. In this way, water activity is reduced, fermentation is controlled, and negative effects from acidity are prevented.

Minimal risk of crust formation

The risk of crust formation is practically eliminated because the equipment is controlled by the moisture released by the product. The working phases during which the product's surface is dried are alternated with resting phases that allow it to "wake up", allowing moisture from inside of the product to be released.

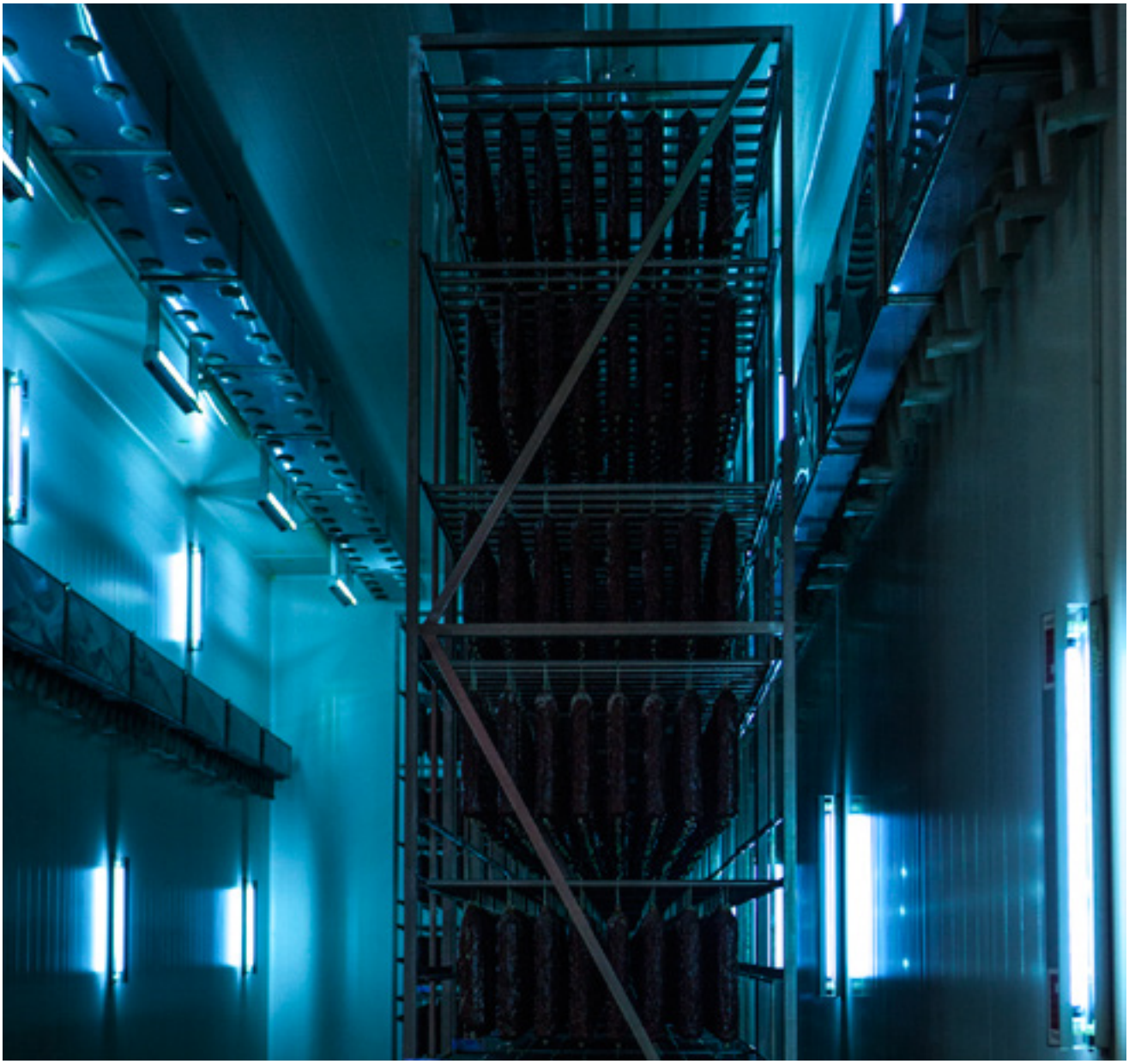
Uniform shrinkage

The distribution of air inside the room must be as uniform as possible in all individual areas in order to obtain a homogeneous product. For this reason, as the result of the technical experience that we have acquired over the course of time, we have designed different air distribution systems according to the loading system used:

- "Turbo" systems, in which the air is sent into the room by two side wall ducts equipped with special conical nozzles, and air is returned through ceiling ducts with micro-adjusting valves. Even for equipment taller than 4 meters it is possible to control air quality (temperature and relative humidity) inside the room with a probe (optional) placed in the inlet duct, rather than using a system that inverts air circulation, in which the inlet ducts are also return ducts and vice versa;
- equipment with circular shape ducts, in which air is distributed with ceiling inlet ducts through a circular section and properly dimensioned holes. Air is returned through grids placed directly on the air treatment unit, or through air return ducts;
- systems with blower walls in which the air is distributed via two walls, powered by a treatment unit which can alternate the supply and return of air flow. In this way, the product enters into contact with a suitable horizontal air flow.

Air regulation

The system offered by Travaglini S.p.A. consists of a T-shaped duct, in which is installed an electric actuator, permitting the movement of two opposed blade dampers.
Compared with simpler and inaccurate systems with flag dampers and circular actuators, this solution offers the advantage of gradually modulating the air flow.
In addition to this, the new generation linear actuator (also with encoder), controlled by our programmable electrical card, allows:



- to regulate the room's transverse cross-flow speed, in order for air to flow over the product more uniformly;
- to regulate actuator speed, in order to allow the air to fill the inlet ducts correctly and uniformly, achieving the same air quantity for all nozzles;
- to adjust the actuator extension range, optimizing air distribution according to the width of the room;
- to make one or more intermediate stops of the air flow within the room, which can be programmed directly in our computerized control unit which manages the system.

Computerized system

Our computerized control and management system, in addition to monitoring temperature and relative humidity, allows:
- to set predefined programmes;
- to control the fluid temperature, optimizing shrinkage;
- to record the graphical trending of different variables and display on a single screen (temperature, relative humidity, etc.);
- to verify the exact progression of the entire maturing process.

Furthermore, to allow for various functions to be centrally supervised, we have designed a software program for this purpose that allows to monitor and manage system alarms, to collect and graphically displayed the rooms' individual data, remote programming, remote support, and automatic centralised control for better management of energy consumption.

Energy savings

Heat recovery:
our system allows to recover the total condensation heat transferred during the refrigeration cycle. Therefore, when the post-heating demand coincides with requirement for cold, there is hardly any need to use external heating sources.
Furthermore, hot water around 40–45°C can be produced with a desuperheater (optionally available) which can be used for other processing systems as well as other plant needs.

Enthalpy:
the enthalpy system utilizes the dehumidifying power of outside air for as long as possible. Our system is based on algorithms that allow to use outside air even when one of the specific values (temperature and relative humidity) seems far from the required values.

Economizer:
in systems with an independent refrigeration unit, there is a sub-cooling system that guarantees a refrigeration capacity that is 15–18% greater than the absorbed electrical potential.

High efficiency motors (IE2–IE3):
increase the system's output, reducing electrical consumption.

Inverter:
frequency regulators, installed on the motor of centrifugal fans and/or compressors, that increase or reduce their rpm in order to improve their efficiency if process and loading conditions change.

Direct coupling motor/fan:
this particular technical solution, combined with the use of an inverter, allows for a reduction in the system's electrical consumption, optimizing its regulation.

Modulation of cooling and heating valves:
to improve system performance in relation to the actual needs of the product during the various phases of maturation maturing.

Hot gas defrost system:
allows to defrost the cooling coil better and more quickly, which consequently saves energy.

Your ideas. Our solutions.