

New Cooler for chocolate moulds

Innovative internal conveyor system and renewed design

In food manufacturing plants, especially those used in the manufacture of chocolate-based products, the conditioning of moulds is a fundamental function – both when they are empty, before the product is dosed, and when they are full, so the changes of state necessary to the process can occur.

The plants, which feature conveyors to carry these moulds at various stages of the process, must be able to group together stacks of moulds within a restricted, temperature-controlled space, placed at set distances apart, and convey them so as to produce high volumes without affecting the continuity of the rest of the process.

These high volumes require controlled flows of cooling or heating fluid that are as uniform as possible, for obvious quality control reasons.

This cooler is essentially a version of such a grouping/conditioning machine, given that the same innovative transfer characteristics can apply equally to heating plants, and the internal route still comprises an entry stacking section, an upper transfer system, and a descending stacking exit system, taking the moulds to the transport system downstream.

More generally, the unit features the following innovations:

Chain-free stacking, raising, and lowering system

Improved ventilation system

Improved structure and covering system with easier access and maintenance

More specifically, the stacking/lowering system is no longer based on added-on systems of chains driven by cogs, but on rods that allow several moulds to be raised or lowered simultaneously and, at the same time, as they engage with each other, automatically align them vertically, rendering the function of the guide holders secondary.

This factor removes the obstacles to maintenance that come in the form of chains (typical of today's coolers and heating appliances) and other moving parts.

Also worthy of note is the immediate advantage of being able to gain access from the side and remove all the moulds manually in case of emergency, and the fact that it is no longer necessary to check the stretching, lubrication, and tension of the chains.

The system can be fed by lines with chains, screws, or rollers, since the grouping and release of the moulds is independent of the type of transport used.

The moving parts are maintenance-free throughout their working life, or equipped with centralised lubrication in areas well away from the product, and overall there is no contact between lubricants and foodstuffs.

The outer casing, which features a new look in keeping with the Carle & Montanari range of quality products, is designed to combine internal fluid transfer with the function of insulation towards the exterior and isolation of the internal conveyor zones from each other.