



CASE STUDY

MB Conveyors - Chillers and air/water heat exchangers cooling plastic caps on custom-made flat conveyors.

A tailor made liquid cooling solution

„Our mission is to offer products that can solve the customer's problems. Once again, working with Pfannenberg, we have identified the best solution to fully tackle the needs in the given context.”

*Gianpiero Baldisserotto
Sales Director MB Conveyors Srl*

MB conveyors has developed a custom-made conveyor system as part of a large bottling plant from a big Italian OEM in the Food & Beverage industry.

This horizontal-motion conveyor can smoothly and efficiently move a huge variety of materials which in this case are plastic caps for a bottling line.

The conveyor's task is not only to receive the caps from the injection or compression molder and transfer them from a point A to a point B, but also to cool them along the path.

Pfannenberg and MB Conveyors have studied and tested together the most appropriate solution.

The customer

Since 1985 MB Conveyors designs and manufactures custom-made solutions, machinery and systems for every application and need in the field of industrial handling.

The company based near Vicenza, in North-Eastern Italy, is a well-known designer and manufacturer of made-in-Italy conveyor belts and auxiliary machinery that are today sold in over 60 countries worldwide, and widely recognized for their excellence in the field.

The solution

With the goal of introducing a cooling component into the conveyor belt path, MB Conveyors had already created a small tunnel and first experimented the lower impact solution: cooling with filterfans.

This type of solutions proved to be poorly adequate for this application needs.

To achieve higher cooling capacity the use of rooftop cooling units was considered. This approach turned out to be effective for cooling but involved risks related to the contaminated environment of the machines characterized by ambient air with high content of dust.

Pfannenberger therefore proposed the combination of a RACK 2400 chiller and a PWD 5302 air/water heat exchanger.

This third solution was widely appreciated since it guarantees both an efficient cooling and an uncontaminated environment.

Product features

RACK 2400

Chiller 2.4 kW

- Robust standard used in the field of laboratory equipment and industrial automation.
- Immersed evaporator to ensure compact outer dimensions.
- Ideal for small plants with space constraints.
- Housing cover made of anodised aluminium.
- Basic housing made of powder-coated sheet steel.

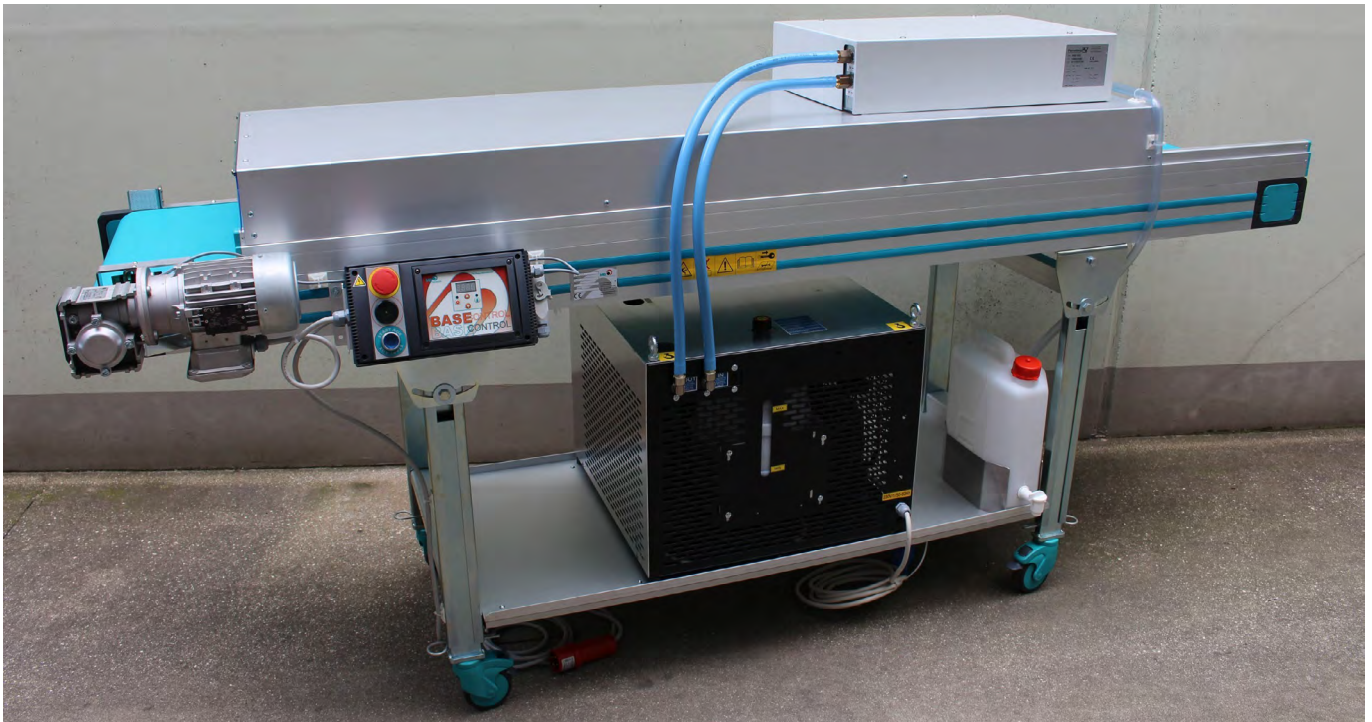


PWD 5302

Air/water heat exchangers 2150 W

- Robust steel cover, easily paintable.
- Water circuit pressure-tested to 30 bar.
- Surface seal to protect against the penetration of water via the roof surface of the control cabinet.
- Simple temperature control with integrated thermostat and solenoid valve.





The PA standard flat conveyor equipped with an additional tunnel and a combination of chiller + air/water heat exchanger from Pfannenberger.

Facts at a glance

Task	Efficiently cool plastic caps while passing along a conveyor belt by clean air despite the ambient air being full of dust.
Application	Conveyor system to be part of a large beverage plant.
Solution	RACK 2400 chillers + PWD 5302 air/water heat exchangers
Success factors	<ul style="list-style-type: none"> • high quality products • efficient conditioning in harsh environments • low maintenance needed