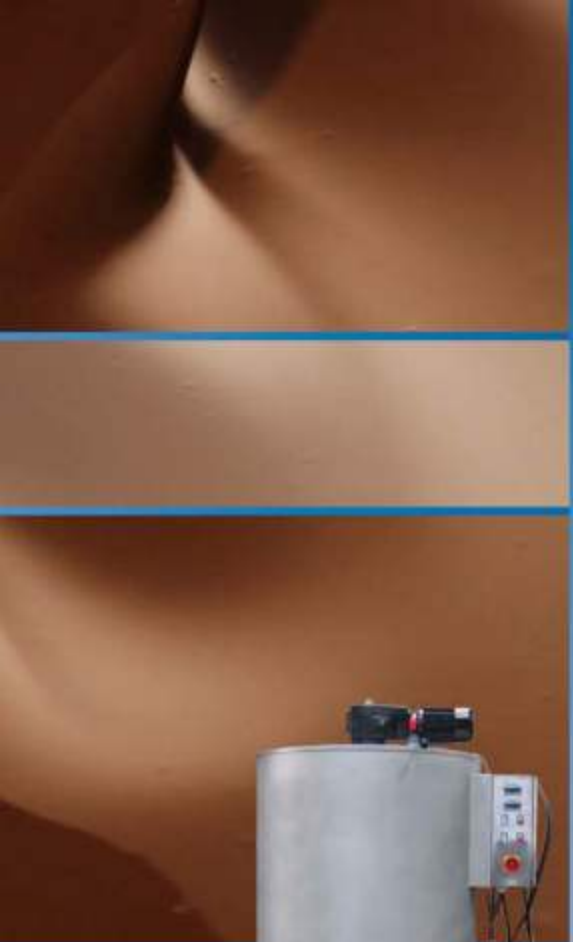




hamburg

MF®

FOR CHOCOLATE



holding tanks



infeed and aligning machine



temper-meter



pre-bottomer

AUXILIARY EQUIPMENT

options

MF-hamburg offers a complete line of auxiliary equipment to add special process features to the production lines, including center feeders, pre-bottomers, sprinklers, and all types of chocolate decorators.

MF-hamburg supplies turn-key systems including all required equipment such as chocolate tanks, refrigeration, water chilling and tempering systems, chocolate pumps, piping, etc.

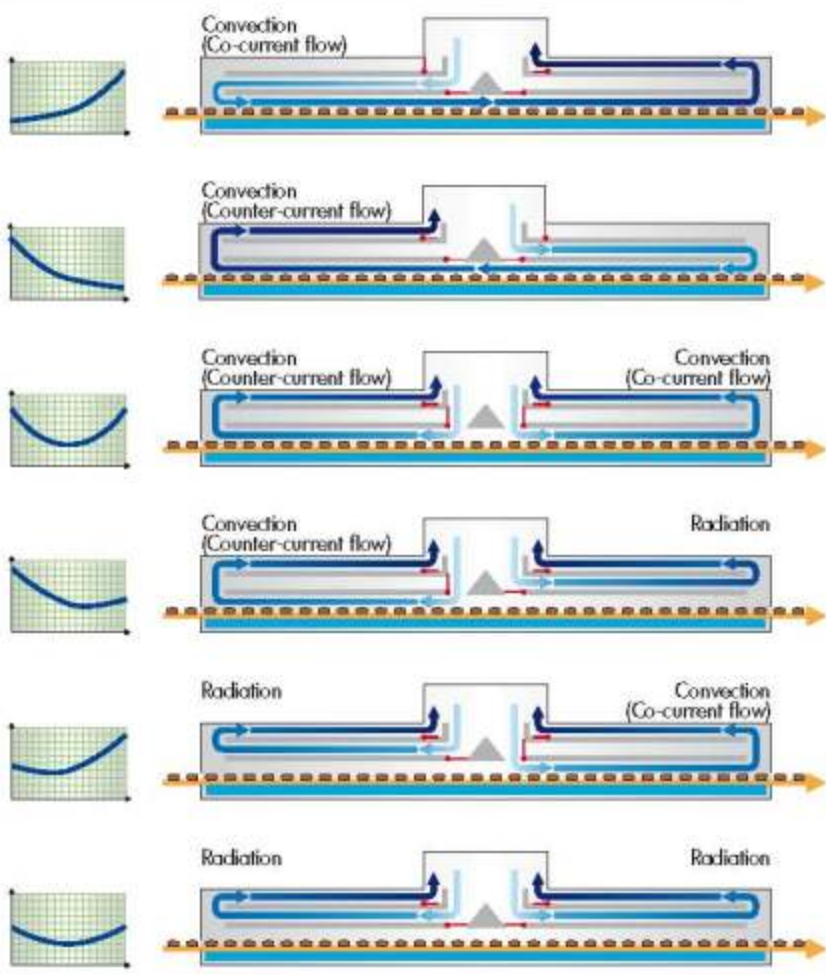


dual decorator





Radiation / Convection adjustment

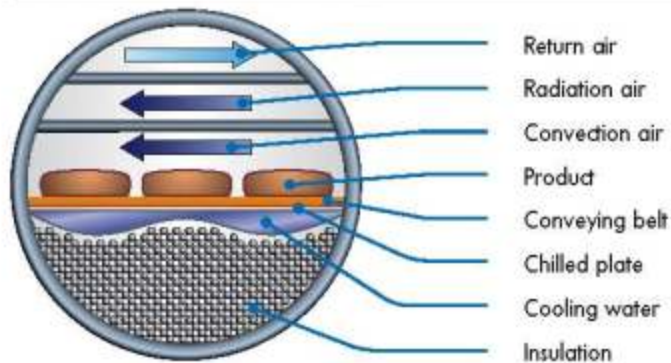


COOLING TUNNELS

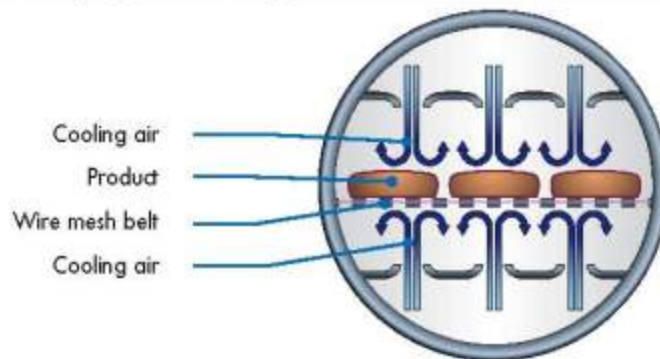
starcool



Radiation / Convection Cooling



Multi Jet Impingement Cooling



Impingement Cooling





COOLING TUNNELS

starcool

Ideally suited for enrobing, post baking, pre-cooling and general cooling and drying applications in the confectionery, bakery and snack foods, and nutrition bar industries. Many applications require cooling tunnels in one or more stages of the production process. While all these applications have some type of cooling and/or drying in common, they are unique in terms of process parameters, temperatures, ambient conditions and capacity.

MF-hamburg offers a complete range of cooling functionality, from radiant to convection, to impingement and contact cooling. All our cooling tunnels are constructed with a water chilled belt slider bed for efficient, controlled, and uniform bottom cooling. Particular attention has been given to guarantee even air distribution to ensure uniform product cooling across the belt.

MF-hamburg's modular approach also provides for easy reconfiguration to increase capacity or adapt the system to a completely different cooling application in the future. Tunnels are designed to meet the strictest requirements for cleaning, sanitizing, and allergen changeover. All our tunnels are made of stainless steel, and have easily removable covers and easy-to-open hinged hoods (with special seals) to allow cleaning and inspection of all internal surfaces, cooling coils, etc.

MF-hamburg offers special air filtration for unique allergen applications and improved shelf-life, and integrated air drying systems for special product applications. In addition to our traditional cooling tunnel designs, we also offer high velocity multi-jet impingement tunnels for higher capacity cooling applications and/or space savings.



TEMPERING



startemp

Model TM...t

Mini tempering machine for feeding decorating units, mini depositing lines etc.

Type

TM 100 t ~ 100 kg/h

TM 200 t ~ 200 kg/h

Type

TM 150 t ~ 150 kg/h

TM 250 t ~ 250 kg/h

Model TM / TM...n

External tempering machines, equipped with integrated de-crystallisation zone. The TM...n line is especially designed for nougat mass.

- **TM** tempering machine with 4 controlled zones
- **TMT** with integrated tank
- **TMTc** including tank and refrigeration

Type

TM 350 ~ 350 kg/h

TM 750 ~ 750 kg/h

TM 1200 ~ 1200 kg/h

TM 2000 ~ 2000 kg/h

Type

TM 500 ~ 500 kg/h

TM 1000 ~ 1000 kg/h

TM 1500 ~ 1500 kg/h

TM 3000 ~ 3000 kg/h

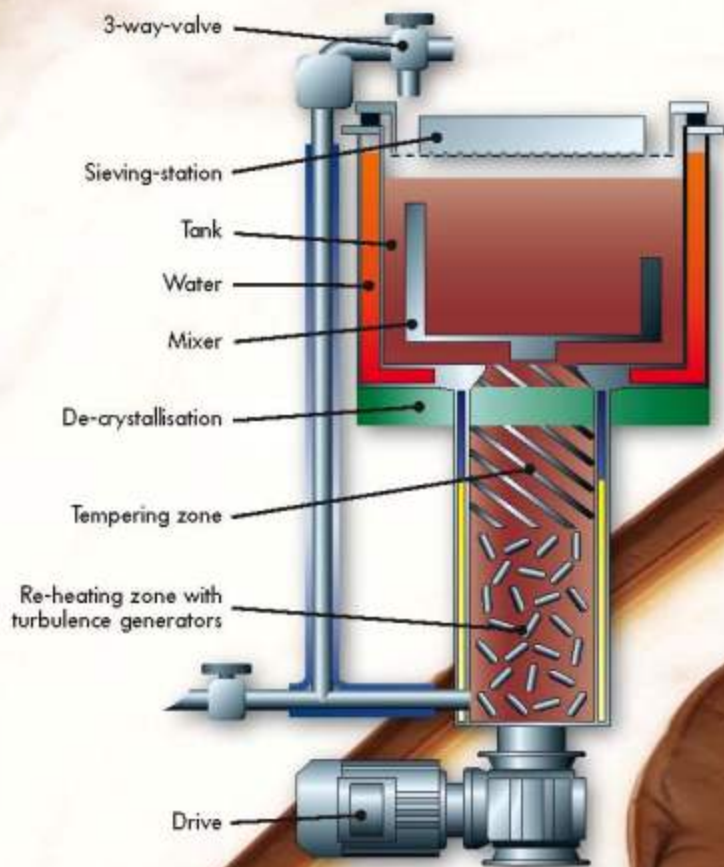
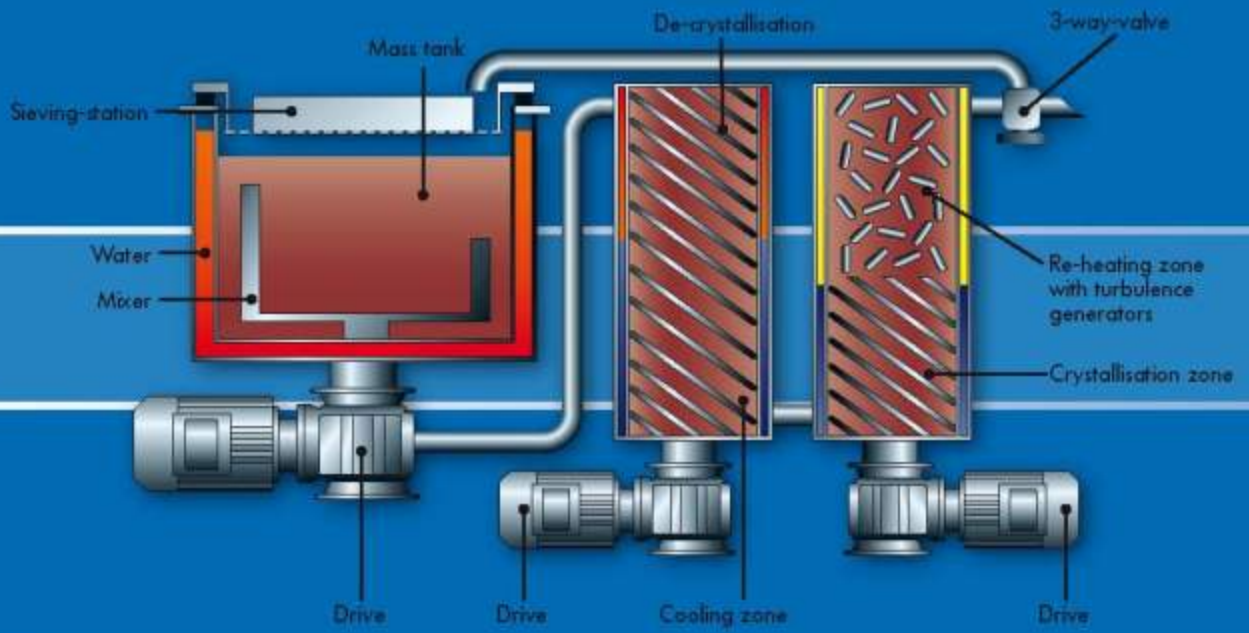
Model TMU

Interchangeable tempering system for MF-hamburg enrobing machines with belt widths from 420 mm up to 2000 mm. With docking station also usable as one individual tempering unit.

Model CC

Compound conditioning unit for precise tempering of compound coatings or feeding enrobers or depositing machines.







TEMPERING

startemp

MF-hamburg tempering and conditioning machines feature optimum pre-crystallization properties and are designed to complement the "STARCOAT" enrobing machines and other chocolate tempering or compound conditioning applications in the confectionery, bakery, snack foods, and nutrition industries.

Chocolate must solidify in the right crystal configuration to obtain high gloss, good snap, and heat resistance for long shelf life. For this it is necessary to seed the chocolate with the proper beta prime crystal configuration. This is accomplished by subjecting the chocolate to precisely controlled cooling and heating stages while applying high mixing and shearing action. Once stabilized, the chocolate can be used in subsequent processes such as enrobing, decorating and molding.

The STARTEMP tempering machines are mounted on stainless steel frames with stainless steel cladding for sanitary operation, and are designed for easy cleaning and fast changeover. They can be set up as stand-alone units, or as integrated tempering machines inside our enrobers to save on investment cost and space. The in-board tempering systems are mounted on castors, so that they can be unplugged and wheeled to an external docking station, or to a wash-down area, allowing easy access to the enrober for cleaning and maintenance.

Our STARTEMP family of chocolate tempering and compound conditioning equipment is available for capacities from 100 to 3,000 kg/hr to match the capacities of our STARCOAT Enrobers.





EASY CLEAN ENROBERS

starcoat

UMT

coating system with
integrated tempering

UT

coating system for
external tempering

UC

coating system
for compound

DUO

coating system for
two-colours-enrobing

W

CIP-system
for water cleaning

CC

coating system
for caramel mass

IC

coating system
for ice cream

Series	Beltwidth
MINI	420 mm
MIDI	620 mm
MAXI	820-1300 mm
XXL	1400-2000 mm



EASY CLEAN ENROBERS

starcoat

- 1) Precision enrobing system applies coating uniformly, at constant target weights across the belt.
- 2) Active temper maintenance system controls both the temperature and pre-crystallization degree of the chocolate, resulting in a stable viscosity for 24/7 production, high gloss and excellent heat resistance for storage.
- 3) Continuous filtration of main coating circuit to ensure continuous curtain and remove any foreign or undesired particle matter.
- 4) Easy to operate with logical operator interface for easy training and reproducible parameter settings.
- 5) Flexible standard design with ample room for additional process features such as additional blower, post bottomer, etc.

Designed according to the latest GMP standards, our enrobers need minimum operator attendance and are very easy to clean and maintain. All internal parts can easily be accessed or removed thanks to the removable chocolate trough with optional on-board tempering unit, coupled with pull-out bottoming station and curtain trough, all of which can be wheeled to a wash-down area on the available cart. The chocolate trough can be stored in a heated docking station where the chocolate is kept at temperature to allow quick start-up when returned to the enrober. The main circuit filtration system can be cleaned and exchanged without interrupting production. It guarantees a uniform, continuous curtain at all times, prevents chocolate build up issues at the detailing unit, and ensures that the product is suitable for final packaging.







EASY CLEAN ENROBERS

starcoat

The STARCOAT "universal" series of sanitary enrobing equipment for chocolate, compound, and caramel coating applications for confectionery, baked goods, ice cream, nutrition bars, etc. are designed to produce top quality coated products, have low operating cost, and allow for easy cleaning and change-overs. While available for small, medium and large production capacities, all of these machines have a number of key benefits and features in common:





THE COMPANY



MF-hamburg is a process machinery supplier for the confectionery, bakery, snack and nutrition food, and dairy industries specializing in the design and manufacture of coating equipment, including enrobers, tempering machines, and cooling tunnels. By offering flexibility and innovative design, we have gained the trust of a significant number of established and world-renowned manufacturers that are using our highly efficient systems 24/7.

MF-hamburg standard equipment designs are highly customizable allowing for future growth and product flexibility. Our consultative approach ensures close collaboration with our engineering staff to guarantee an uncompromised process solution. In turn, our machines operate at higher efficiency, produce a top quality product and provide added value for future expansion. Our machinery is robust in design and constructed in stainless steel. It provides for reliable operation, is easily accessible for cleaning and maintenance, and complies with the latest standards of GMP design.

MF-hamburg provides professional and efficient after sales support. We work closely with our customers to achieve high production efficiencies at low operating cost to realize a quick return on investment.





hamburg **MF**®

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