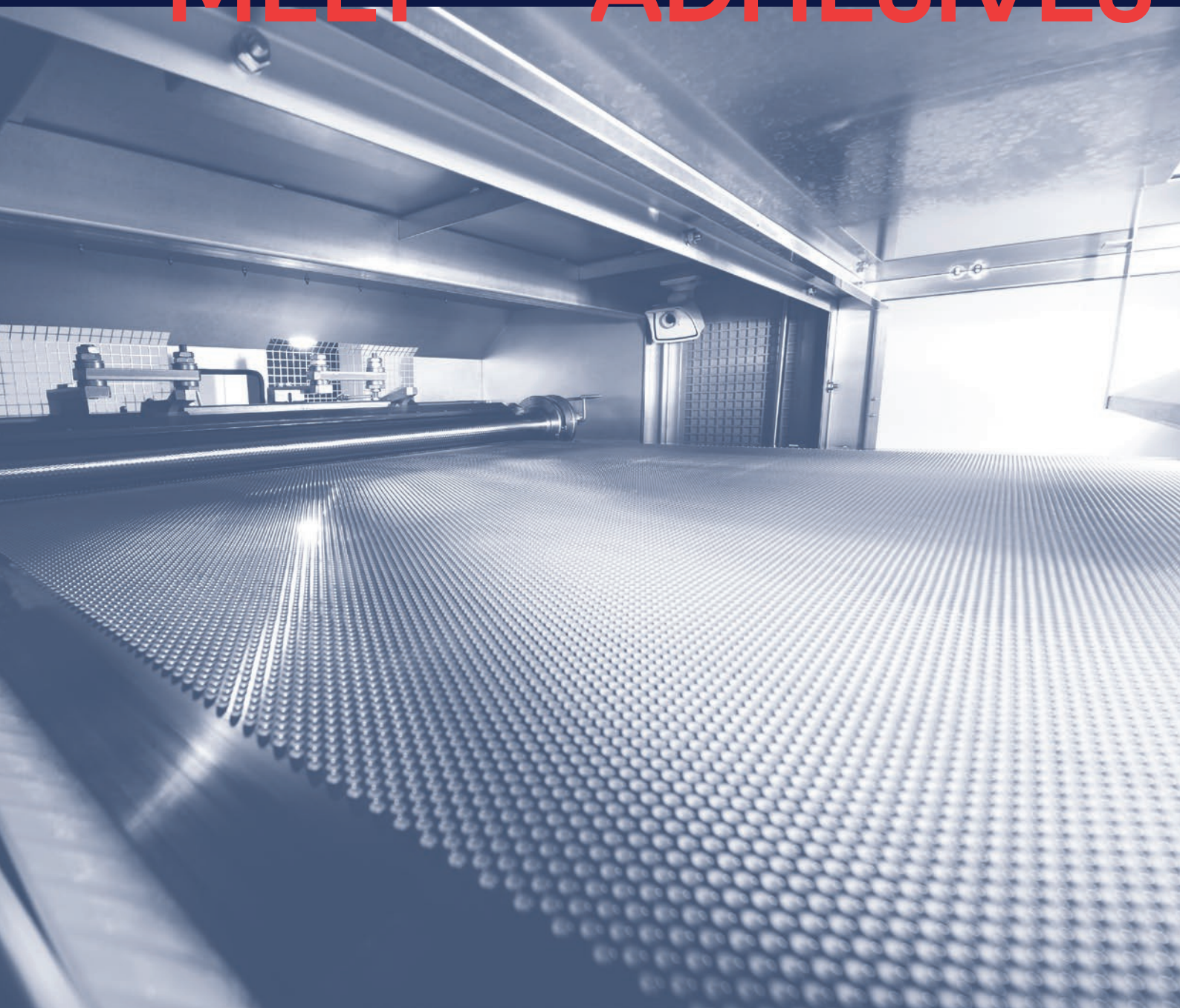




Our Rotoform process provides an extremely efficient method of solidifying hot melts, delivering consistently sized pastilles through indirect cooling, eliminating all the disadvantages of underwater systems.

ipco.com

DRY—PASTILLATION— —FOR—HOT— —MELT—ADHESIVES—



— ENVIRONMENTALLY FRIENDLY PRODUCTION OF UNIFORM PASTILLES

The production and processing of hot melts has become an increasingly important market in recent years and we offer a highly efficient and environmentally friendly solidification solution in the form of our flagship Rotoform system.

The Rotoform process delivers consistently sized, hemispherical pastilles. As this is a completely dry system based on indirect cooling, there are none of the problems associated with underwater granulation, and the product leaves the system in a cold, solidified (i.e. non-sticky) state, ensuring clean, trouble-free packaging.

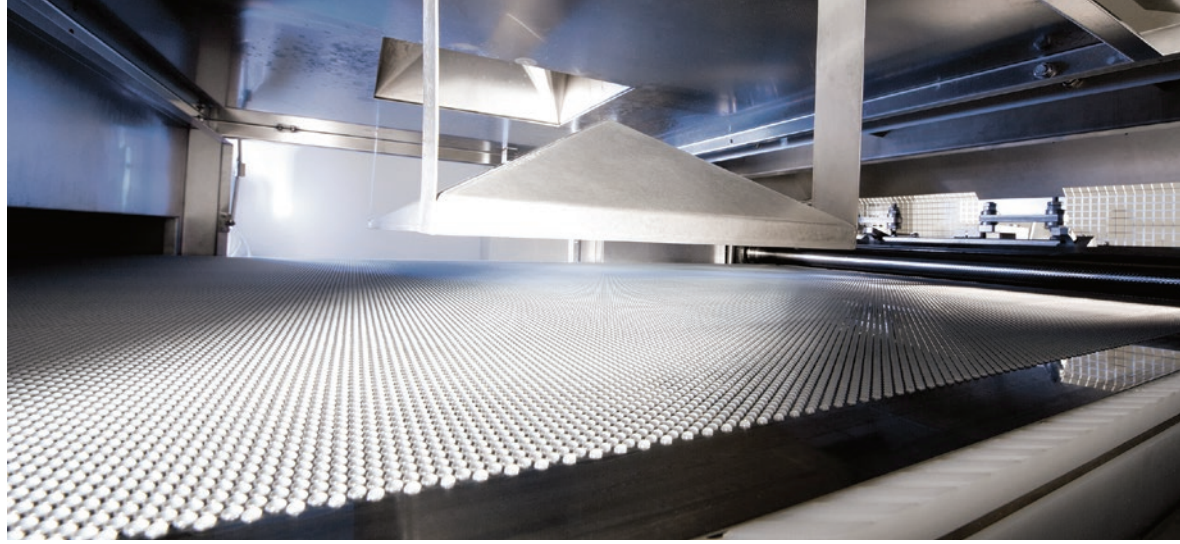
The process is suitable for a wide range of Hot Melt Adhesives and more than 150 HMA plants around the world are now based on IPCO Rotoform technology.

Key benefits of Rotoform solidification include:

- Size reduction in liquid phase.
- Free flowing end product.
- High quality pastilles, adjustable from 2–30 mm.
- No drying necessary as no contact between product and coolant.
- Low maintenance requirements.
- Regular appearance, defined weight and volume.
- High bulk density and good packaging properties.
- Dust-free production and product.
- Very low vapor/gas emissions.
- Low energy consumption.



Hot melt solidification plants around the world are based on IPCO Rotoform technology.



Complete hot melt processing system based on Rotoform solidification

We offer complete hot melt processing systems covering everything from initial system design, through solidification, to granule packaging solutions. Plants offer a high degree of flexibility, allowing quick and easy switchover between different types of hot melts.

Trials can be carried out on your own products using the pilot units available at our Productivity Center, and we will use our extensive experience to ensure that your IPCO hot melt processing system meets your specific objectives.

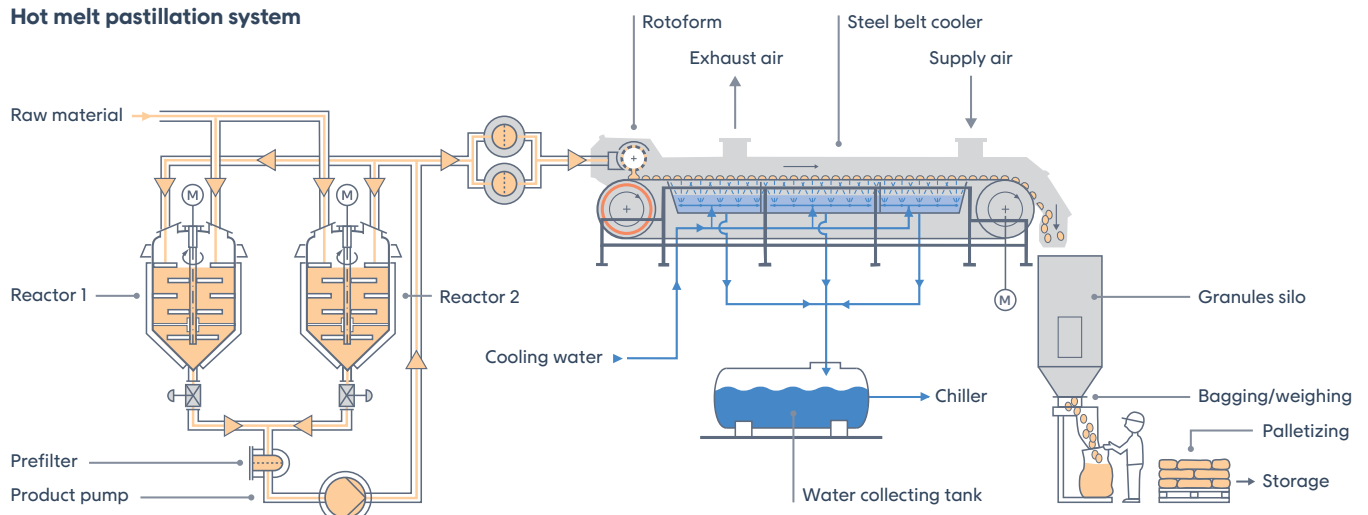
Typical IPCO Hot Melt Adhesive (HMA) production system

Systems will vary depending upon customer requirements, but a typical HMA processing system will consist of remelting equipment for wax, a pair of mixing reactors, the Rotoform drop depositor (or strip former and cutter), steel belt cooler and downstream bagging and weighing equipment.

Typically, resin, premelted wax and polymer are blended in a mixing reactor on the level above the solidification plant. While one batch is prepared, the batch that has already been mixed is transferred to the Rotoform unit, a process that enables continuous pastillation.

The upstream part of the system ensures that all ingredients of the hot melt are melted and mixed at the required temperature.

Hot melt pastillation system





Component parts include:

- Stainless steel vessel with jacketed body and bottom thermal oil heating.
- Coaxial mixer (variable speed).
- Vacuum pump system (evaporates the bubbles of the melt).
- Dust/fume extraction system.
- Pump, piping, temperature control valve and detector.
- Computer controls.

The hot melt is then fed via jacketed piping through a filter to the Rotoform system.

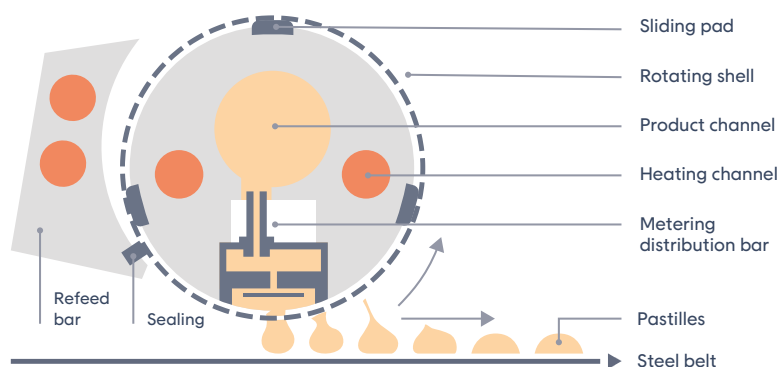
Rotoform – the ideal solution for hot melt solidification

The Rotoform deposits the hot melt onto a continuously running steel belt in the form of defined droplets. As they travel along the system, heat is transferred from the product to cooling water sprayed against the underside of the steel belt and the droplets are solidified into consistently sized pastilles.

The cooling water and product do not come into contact with one another so there is no possibility of cross contamination. The water is then collected for recooling and can be used over and over again. In addition, pastilles are cooled from above by conditioned air.

The application of a release agent at the feed end of the steel belt cooler, together with the use of an oscillating knife at the discharge product end, ensures clean removal. The solidified pastilles are collected in a buffer vessel ready for weighing and bagging.

Rotoform process



System specifications

Feeding temp.	up to 250 °C
Discharge temp.	25–40 °C
Viscosity	1 000–40 000 mPa s
Pastille size	2–30 mm
Cooling water temp.	15 °C
Capacities for pastillation	3 000 kg/h

The significant advantages of this process are:

- Production of consistent, round shaped pastilles with very low dust content.
- Accurate control of pastille dimensions and shape, with simple changeover to different sizes.
- Easy handling of a wide range of hot melts.
- Easy cleaning of the Rotoform drop depositor and quick changeover to other products.
- Different product sizes can be produced with one machine.