



Hosokawa Micron develop Mikro ACM Mills for processing High Fat Content Cocoa or other Sticky Food products

Mikro ACM Mills from Hosokawa Micron Ltd can be used across almost the whole field of fine and micro-sized size reduction of products up to a hardness of 4 Mohs but their high air throughput, material flow and gentle comminution make them uniquely suited to the processing of heat sensitive products such as high-grade cocoa powder or chocolate crumb. New developments in design have made the Mikro ACM even more suitable for such heat and flavour sensitive products.

With an internal air classifier, these impact mills are capable of fine grinding many difficult food materials without creating excess ultrafines. The ground product has a steep particle size distribution curve and this can be tailored to suit the application by adjustment of grinding conditions and the air classifier speed. In the food industry these tight tailor made grain size distributions have economic advantages in dispersion and subsequent handling operations.

New developments of the Mikro ACM include the direct cooling of the grinding chamber which now means cocoa with a fat content of 26% can be milled without risk of product degradation. This high fat cocoa cannot be processed with pin mills, but the Mikro ACM, air classifier mill can achieve the requested fineness of 99.7 up to 99.99% < 75 μm . Reduced maintenance and cleaning intervals now mean there is even less risk of microbial contamination. Designed as a closed loop system, the air quality remains constant and resulting low air humidity prevents condensation forming.

Many chocolate companies use the ACM for producing a high quality chocolate crumb with a maximum particle size of 22 microns and a D50 of 10-15 microns which produces a non gritty and very smooth final product consistently all the time. All this from a single piece of equipment means capital and operating cost savings over wet milling systems. Chocolate crumb is a high fat content material which can be very sticky and difficult to handle and process .

The Mikro ACM has an impeccable pedigree developed over many decades by Hosokawa Micron and is available in a very wide size range from laboratory to large production units of several hundred KW, handling many tonnes per hour. Scale up confidence and repeatability of results is excellent. Easy clean designs where the mill internals can be fully exposed for cleaning within minutes and CIP system designs are also available. Safety is paramount and the full grinding system can be protected against dust explosion hazards, usually by a Pressure Shock Resistant design (PSR) or inert gas blanketing.

