

Case Study No 4

# BATCH PRODUCTION OF CONFECTIONARY AND DESSERT MIXES

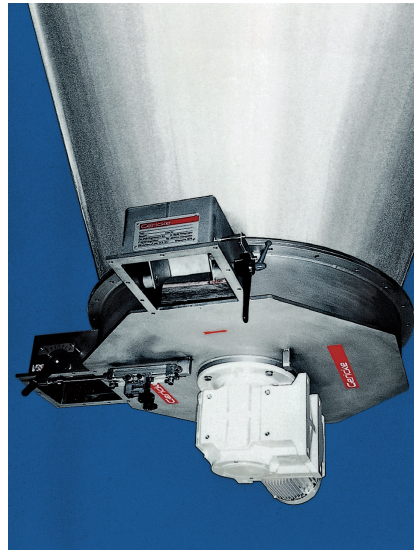
<b>Description</b>	Universal feeding and mixing stations for the production of confectionary, cake and dessert mixes.
<b>Client</b>	Systems commissioned for high volume, quality food manufacturers.
<b>Products</b>	Sugar, starch, cacao, flavours, vitamins, liquids.
<b>Requirement</b>	Flexible, high throughput mixing plants installed into buildings with limited headroom. Frequent recipe changes demand simple change over and easy cleaning.
<b>Product characteristics</b>	Medium to poor flowing characteristics, fragile, colourings, small / trace additives.
<b>Gericke Technology</b>	Individual component batch weighments using loss-in-weight scales mounted onto receiving vessels equipped with RA bin dischargers. The RA unit can be fitted with up to 4 outlets.
<b>System advantages</b>	Proven, standardised feeding and mixing modules; automated recipe dispensing to the mixer; complete emptying of batch receivers and simple cleaning for frequent product changes; low energy input with little temperature rise into product; high mixing homogeneity including small additives; easily installed into locations with limited space.



**The GMS multiflux mixer is at the heart of the process. This unit operates with a Froude reference of 1 to 2, which ensures that the product is mixed within a fluidised suspension zone. A homogeneous mix is achieved within 2 minutes with no product breakdown or temperature rise. The arrangement of the mixing tools allows the injection of liquids without contacting the tools, which reduce agglomerations. The mixer is mounted onto loadcells for direct check weighing. Raw materials and additives are conveyed into day bins mounted onto loadcells and RA bin discharger.**

RA bin dischargers use a rotating arm to ensure a consistent mass flow of material and the outlet flaps provide metering of the product and complete shut off of the flow. This flap eliminates the need for further metering devices or valves for re-filling the day bins.

The mixer is then discharged into IBC containers or direct to packing lines and the assembly can be located into buildings with low headroom.

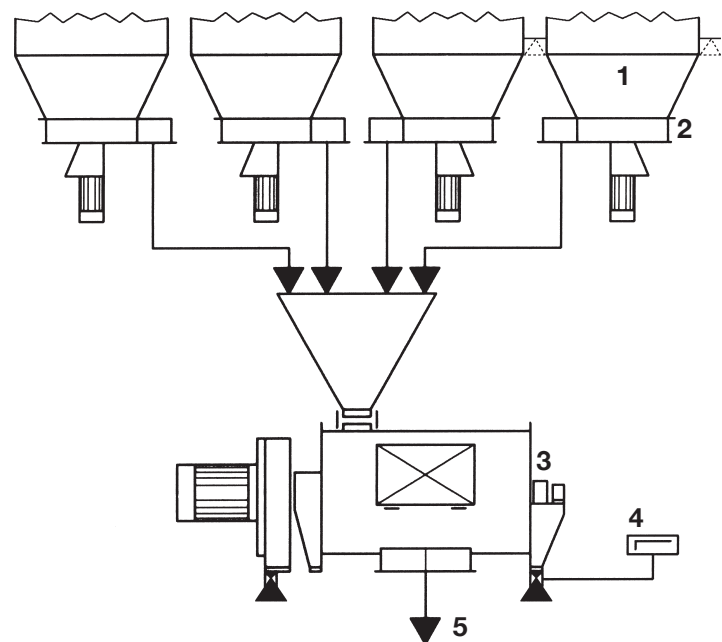


Bin discharge agitator

The complete feeding-mixing station fits into areas with limited headroom.

- The weighing and system controller is via a single PLC based panel incorporating operator interfaces and graphic visualisation.
- Gericke offer a test facility for arrangement of full scale pilot scheme trials under industrial conditions.

GMS mixers are used for a wide range of powders and solids including fragile components and small additive quantities. The design complies with hygiene regulations and can be easily cleaned using dry or wet methods including CIP. The chamber design ensures little residue allowing fast change over of recipe types.



**Legend**

- |                        |  |
|------------------------|--|
| 1 Receiving hopperr    | 4 Weighing system for mixer and receiver |
| 2 RA Bin discharger    | 5 Discharge to IBC'S                     |
| 3 GMS multi-flux mixer |  |