

Production of Detergents with Highly Concentrated Cleaning Power

Accurately fed, mixed and extruded

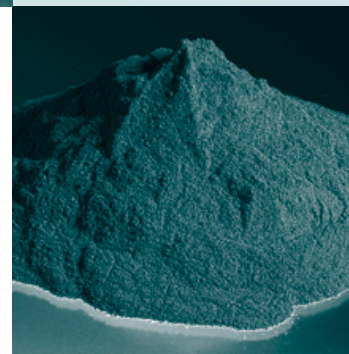
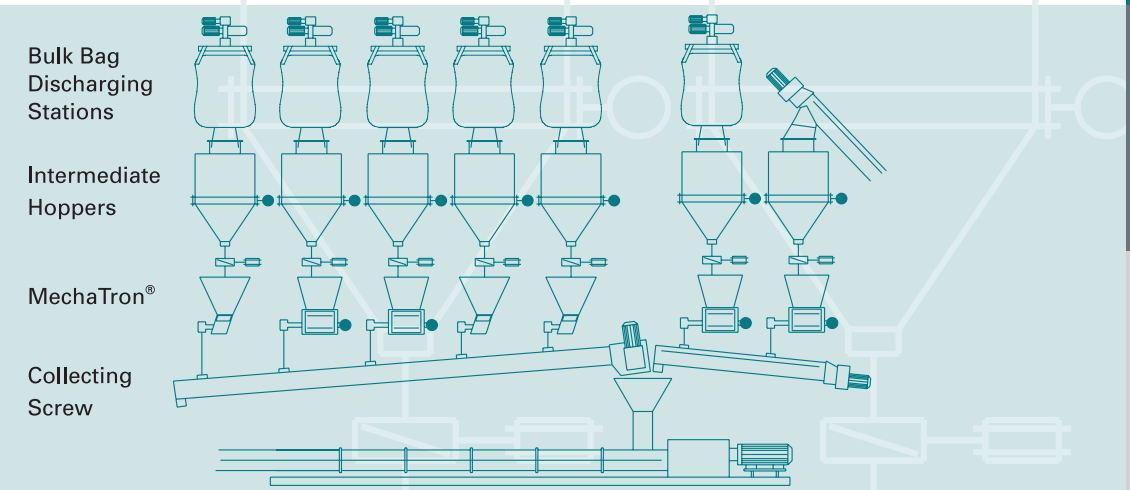


The production of a compact, state-of-the-art detergent presents a true challenge to process technology. The homogenous composition of the detergent is an important quality criterion for washing performance. Accurate feeding, mixing, and extruding are critical. A task that is accurately prepared by Schenck Process by means of integrated high-tech processing solutions.

Simply said, the process is similar to the principle of a pasta machine. The dough-like master batch is prepared from solid and liquid components after the accurate feeding of predetermined "formula" components and it is pressed through a strainer plate using high pressure. The "spaghetti detergent" is cut off by rotating knives, formed, dried and strained – and processed into a detergent end product with other ingredients. A process that reaches mass flow rates of at least 15 to 20 t/h [metric], thanks to state-of-the-art equipment by Schenck Process.

Using scales and MechaTron® feeding systems, raw materials for manufacturing detergent are fed into the extruder from the Bulk Bags and supply silos via conveying devices. These supply silos are used as temporary storage containers that are filled up as needed by Bulk Bag discharge

stations. From there, the raw materials arrive on the conveying equipment via Schenck Process feeding systems which takes them to the downstream processing stations.



Our Solutions Package

- ☑ Raw materials handling with day silos for the main components
- ☑ Raw materials handling with Bulk Bag discharge stations and intermediate hoppers
- ☑ Filling and charging device from the intermediate hoppers into the weighfeeder
- ☑ Weighfeeders for direct discharge of powders from the silo: perborates, carbonates, etc.
- ☑ MechaTron® Coni-Flex® vibratory feeder for powder discharge from the intermediate hopper
- ☑ MechaTron® Coni-Steel® for the discharge of poor flowing powder from the intermediate hopper
- ☑ Gravimetric feeding of the main ingredients and additives using a Loss-in-Weight Feeder or weighfeeder.

Advantages

- ☑ Single feeder for all raw materials, from one manufacturer
- ☑ High flexibility while changing formulas and products
- ☑ Different products weighed with a single weigher without reconfiguration
- ☑ High feeding accuracy and constancy ($\pm 0.5\%$), even with difficult-to-handle bulk solids
- ☑ Integrated feeding and control electronics
- ☑ Low investment with the MechaTronic solution
- ☑ Easy connection to the site control system via Profibus
- ☑ Easy integration into the production process due to compact design
- ☑ Process reliability proven through testing in our bulk solids lab

More about MechaTron® feeders on pages 20–29

More about SacMaster® bulk bag discharge system on pages 36–37

More about single-shaft and double-shaft feeding elements on page 27

More about vibratory feeders on page 27

More about MULTIDOS® L & -F and MULTIDOS® M on pages 38–41

