Plastics Compounding

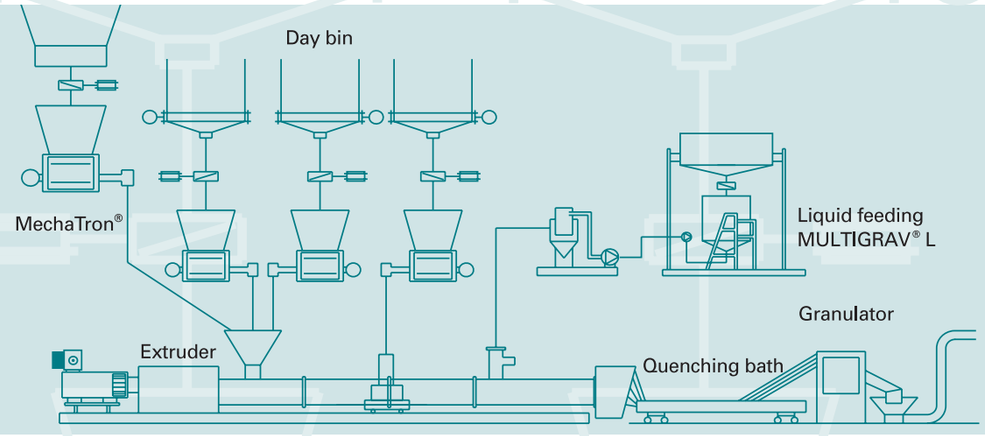
Feeding with a system: highly accurate, highly constant – ready for each change of product

The enhancement of standard plastics (PE, PP, PA, ABS, SAN) with additives for customized application of plastic materials places extreme demands on the plastic mixer/compounder and requires high flexibility. Mixing takes place during a highly viscous melting phase, which is only possible with a specially matched mixing tool. The mass flow rates in the compounder lies between several hundred kg/h [metric] up to 10 t/h [metric].

The short-time feeding constancy is critical in the case of mega-compounders with speeds of up to 1,000 rpm. Above all, the high reliability and accuracy of the MechaTron® feeding units ensures the required product quality.

Production of a high-quality plastic granulate, consisting of standard plastic material plus additives, such as:

- Other standard plastic materials
- Fillers (e.g. $CaCO_3$, talc, carbon black)
- Fibers (glass fibers, coal fibers)
- Other additives
- Liquids (cross-linking agents, lubricants)
- Highly abrasive glass fibers must be directly fed into the melt.



Free to poor flowing additives perfectly fed

MechaTron® Loss-in-Weight Feeders provide the optimal feeding component for any application desired. From single-shaft and double-shaft feeding components to vibratory feed trays.

- Coni-Flex® feeders are suitable for free to moderately flowing products
- Coni-Steel® feeders with single or double-shaft feeding elements are recommended for poor flowing products. Key advantage:
  Self-cleaning and little pulsation at low speeds of the discharging element.
- Single-shaft feeding elements are available in the form of screws and helices.
- The use of vibratory feeders helps to achieve high setting ranges at the highest feeding constancy, e.g. for granulates, pellets, chips, and fibers.
- The proven DISOCONT® measuring and control electronics permit easy integration in the production process.
- DISOCONT® MASTER Touch group rate control with receipe management.

Material may be fed into the compounder in various ways:

- Vertically by means of an inlet funnel
- Horizontally via a lateral feeder, which conveys into the melt
- Liquids are added directly along the compounder housing by means of an injection needle.

Our Solutions Package

- Raw material handling with a day bin for the basic material and the additives
- Filling and charging devices from the storage container into the weighfeeders
- Weighfeeders for the various products

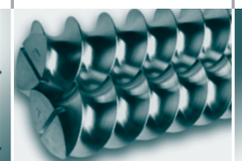
Advantages

- Feeding systems from one source for all free to poor flowing raw materials, additives, and liquids.
- High feeding accuracy – better than ±0.5%
- High feeding constancy – better than ±0.5%
- High flexibility while changing formula and products
- Integrated feeding and control electronics
- Easy integration into the production process
- Low investment with the MechaTronic solution
- Process reliability due to individual tests in our bulk solids lab

More on MechaTron® Loss-in-Weight Feeders on pages 20-29

More on SacMaster® on pages 36-37

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



More about vibratory feeders on page 27

More on DISOCONT® on pages 126-127