

Blending & metering

Managing the moulding process can become a complex task; that is why it may be necessary to rethink the whole structure by planning a centralised system to make the whole management easier. A wide range of centralized systems are usually chosen for the storage, feeding and dehumidifying process, including those which can totally replace human work.

MORETTO



feedback control system for real-time regulation of temperature and pressure of the material in an extruder has been designed and experimentally tested. Real-time regulation of temperature and pressure has been effectively achieved by using standard PID control algorithms. The performance of the control system can be considered satisfactory from all points of view.

Automatic processing machines can also involve metering, grinding and temperature control. These interventions allow obtaining important advantages with a strong impact on costs and organisation. In order to find the best solution to each problem, every company has to consider these questions thoroughly. In recent years Moretto PA faced many challenges, coming up with a number of automated solutions for every different need. One of the fields where the development of innovative solutions has been concentrated is metering. DGM gravimetric blenders have now become a real point of reference in the weighing dosage field, especially now that the whole range has been enlarged with the new DGM 800. This series has been specifically studied to treat all throughputs up to 1,800 kg/h with 2 and 8 ingredients. These dosing units work with batches and, thanks to their exclusive double lid-shutter device based on a double closing movement of the dosing outlets, are twice as fast as the other blenders now on the market. Moreover the hopper is entirely disengaged from the weighing cell; cables, connections, pipes for compressed air and opening devices do not interfere with the operations of the hopper, ensuring, thus, dosing batches with high resolution. DGM blenders can be equipped with 6 different types of hopper and fitted with the exclusive microdosing Rotopulse system.

To check the level of speed a special digital electronics has been developed, reducing control and reaction time. The reaction speed of 70 msec is so high that no eye can perceive the movement. Furthermore the DGM units are equipped with a double-helix hemispherical mixer which blends the material homogeneously, avoiding any possible stagnation. Each machine is also equipped with a useful hand control tool which stores up to 200 recipes and makes the user interface very easy.

In order to manage these systems, the special supervising software M32 was designed, which is able to control up to 32 dosing units. Based on a personal computer, this system allows realising a network of dosing stations which can be programmed and

controlled by only one user's position. Moreover it stores the configuration parameters of each single station and detects every possible alarm.

Another recent introduction is the DVR microdosing system, which works using a cave rotor. This pulsed microdoser has a direct percentage setting and embodies the ultimate solution for master and additives' precision microdosage in the processing of plastic materials. Ideal for low-tonnage moulding machines, DVR is available in mono-component and multi-component version alike. It is the right union between needs and performances, dosing a minimum batch of 0.08 g with a high precision level.

DVR is installed as a normal blender and perfectly adapts to the machine; in order to face the most various needs of volumetric dosing, the DVR 1 model can be equipped with rotors of different power. The dosing system is based on a cave rotor mechanism which, contrary to the screw system, does not need sophisticated control systems. This means that all costs are cut. The machine works on the weight of the moulded part and the dosage is based on the loading time of the moulding machine.

for details: circle 4111
