



ADROIT
TECHNOLOGY

BLEND0

GRAVIMETRIC CONTINUOUS BLENDER (LOSS-IN-WEIGHT)
WITH INTEGRATED GRAVIMETRIC EXTRUSION CONTROL

DOTECO
ART OF CONTROL

BLENDO ADROIT TECHNOLOGY

GRAVIMETRIC CONTINUOUS BLENDER (LOSS-IN-WEIGHT) WITH INTEGRATED GRAVIMETRIC EXTRUSION CONTROL

Designed to blend pellets in extrusion processes where dosing accuracy and a homogeneous dispersion of additives are strictly required. Unaffected by vibrations, BLENDO has been designed to be easily mounted directly on the extruder throat to replace the conventional feed hopper or for mezzanine mounting.

Available in 3 sizes, with throughputs up to 200, 600 and 1200 kg/h.

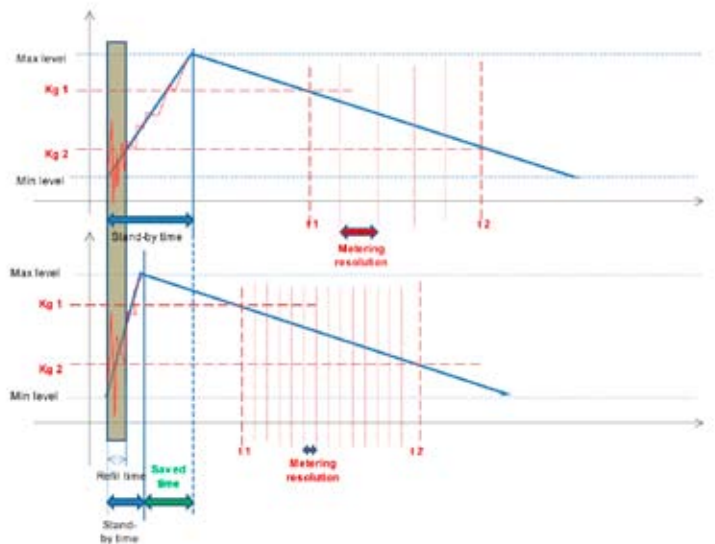
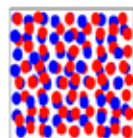
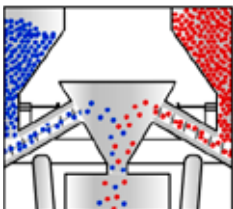
PRODUCT DESIGNED AND ENGINEERED TO TOP LEVEL RELIABILITY AND QUICKEST LEAD-TIME



- Number of parts optimized to minimum
- No one hand-made part, but:
- Cast aluminium parts;
 - Molded plastic compounds hoppers;
 - Machined steel parts;
- PLC based control from market leader producer;
- Re-engineered manufacturing process reducing lead time.

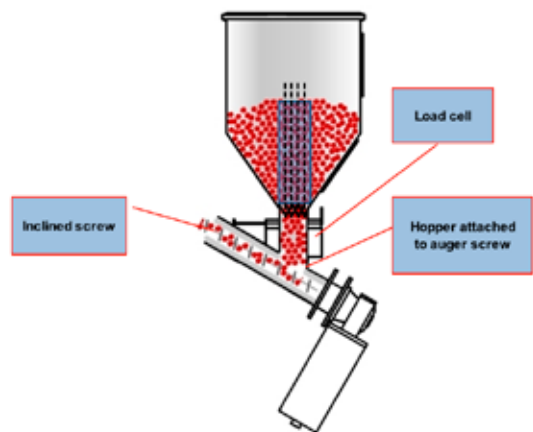
CASCADE MIXER

The materials streams free flow, just in the right proportion, through a cascade where they are mixed together to make an homogenous blend with a perfect dispersion of additives, even if the ingredients have different bulk density or granule size.



FULL GRAVIMETRIC CONTINUOUS LOSS-IN-WEIGHT BLENDING

- We put our last state-of-the-art control software together with the most performing PLC's and load cells. The result is the highest level of accuracy and precision in blending, most probably the highest for a continuous blender:
 - Gravimetric efficiency better than 90%
 - Enhanced control dynamics and weight measurement quality improve process capability
- Each ingredient (mains and additives) is continuously metered by individual auger-screw feeders.
- Thanks to a very high noise immunity of control system, the whole feeder (hopper, screw, motor, gear box) is weighted, not only the hopper; hence:
 - it's right the material flowing from feeder into the blend to be metered, not the material flowing from the feeder hopper;
 - all the material in the feeder hopper is duly metered, also when it goes straight down to the hopper outlet

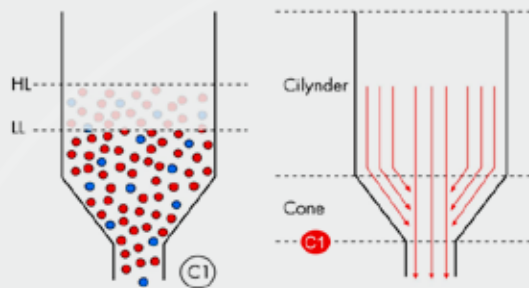


- Inclined screw feeders to prevent material "dribbles" or overshoot.
- Ultimate closed loop control of auger-screw speed. Each feeder, has a separate control loop which keeps the actual flow rate to its set point into the receipt.
- Auger screws with widest throughput ratio
- Screws very easy to be removed and changed.
- 250 gr/h as minimum gravimetric flow rate

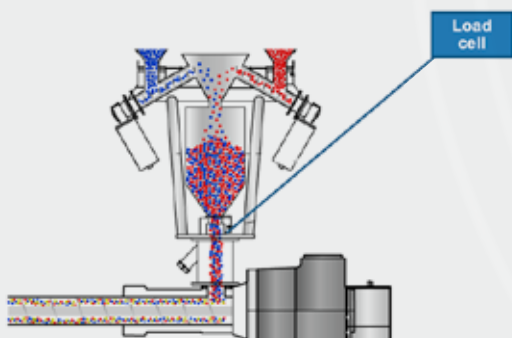


INTEGRAL WEIGH DOWN COMER HOPPER

- The cylindrical shape leads the near-perfect blend to flow as a plug, all the way through, to the extruder screw.
- The integral weigh down comer hopper is on load cell. No volumetric measuring and no ultrasonic or capacitive level sensors.
- The material level is gravimetric controlled, kept to a suitable set-point:
 - to keep the extruder screw always fed.
 - to limit the material stay time, hence to avoid any preferential flows and de-mixing of ingredients with different densities.



INTEGRATED GRAVIMETRIC EXTRUSION CONTROL (GRAVILINE)



- Available for mono extrusion and co-extrusion processes. It controls the weight per meter of the end product, reaching and maintaining minimum tolerances. GraviLine can measure and control extruder throughput or use the data to control line speed, or alternatively, carry out both functions simultaneously. With multi-layer lines the throughput of each extruder is measured and controlled to maintain a constant layer-to-layer percentage ratio in the end product.

INTEGRATED LOADING SYSTEM CONTROL (SMARTCONVEY)



- Fully automated loading system control, easy operated by the same interface used for gravimetric blenders. One or more vacuum pumps to serve more than one receiver whose association can be set through configuration. All receivers linked to the same pump are served in turn, according to a priority sequence automatically assigned. Loading active control to reduce ingredient at minimum on changeover.

FEATURES

- Quick and easy access to all parts for maintenance cleaning.
- No tools required.
- Drain spout for quick and complete ingredient feed hopper emptying
- Clean out doors for fast removal of dust or ingredient residues and for visual inspection
- Removable individual hopper for each ingredient
- Easy to use, simply set the dosing percentage
- Full modular construction, from two to six components
- Self-supporting structure prearranged for vacuum receiver installation without additional supports
- All parts that come into contact with the ingredients are made of food-grade materials or finishes
- The on-board control box does not require any floor space
- PLC based control, CPU x86 100 MHz Intel compatible (or superior)
- Standard type load cells, high resolution weighing system (16 bit A/D converter) to maximize analog accuracy
- Flashing alarm signal and diagnostics in plain text
- No scheduled maintenance is required
- Reduced installation costs. Complete wiring of the dosing unit is factory made



WIDE RANGE OF NETWORKING OPTIONS FOR REMOTE CONTROL AND DATA ACQUISITION

- OPC via Ethernet (one entry-points)
- OPC via CanBus (one entry-points or multi entry-points)
- ModBus TCP/IP (one entry-points)
- RS485/422 ModBus (one entry-points or multi entry-points)
- Profibus (one entry-points or multi entry-points)
- CanBus (one entry-points or multi entry-points)



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