

INNOVATIVE
SOLUTIONS
FOR FOOD
PROCESSING
& PACKAGING



CRESCENT SYSTEMS



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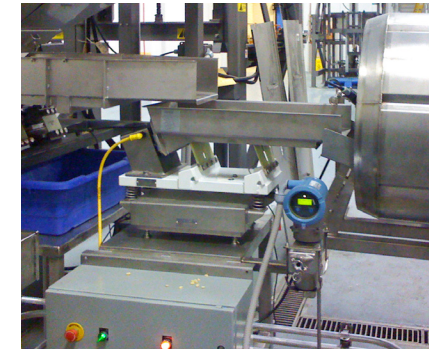
**WEIGHING EQUIPMENT
& COMPONENTS**

Crescent Systems, Inc., is a consulting, engineering, and manufacturing company specializing in products and services designed for use in the Food Processing and Packaging Industries. We undertake research and development to build innovative solutions for Food Processing and Packaging.



MAGNA WEIGH

A patented continuous In-Line Weighing Feeder system which combines the weighing capabilities of weigh belts with sanitary features of a vibratory conveyor. This innovative weighing system incorporates two vibratory conveyors. The Infeed vibratory conveyor has a hopper and it feeds product to the weighing conveyor. The weighing conveyor weighs the product and sends a control signal to the infeed vibratory conveyor to maintain a desired feed rate. The weighing conveyor is constant speed with variable depth whereas the infeed vibratory conveyor is constant depth with variable speed. Both units are fabricated from stainless steel with sanitary construction. The controls for the feeder are the heart of the system. Using industry standard PLCs and Touch Screen Operator Panel, it is very easy to set feed rate and control feeder functions. The feed rate may be entered in engineering units such as pounds per minute or kilogram per hour.



MULTIPLE INGREDIENT FEEDERS

By combining the above mentioned Magna Weigh or the Weigh Monitors with various Loss-In-Weight Feeders, a multiple ingredient feed system may be realized with all of the ingredients being fed at a rate that is a slave to the feed rate of the master product. The operator needs only to enter the rate of product in lbs/(min or hr) for the master and percentages of 1, 2, or 3 ingredients. Kg units can also be selected. The set-points are automatically sent to the slave products and the system maintains rates for all products by weight. A typical application is where seasoning is applied to a snack product. The snack product is fed to a tumbler drum with the Magna Weigh and seasoning and oil application is slave to this product to maintain consistent application of seasoning.

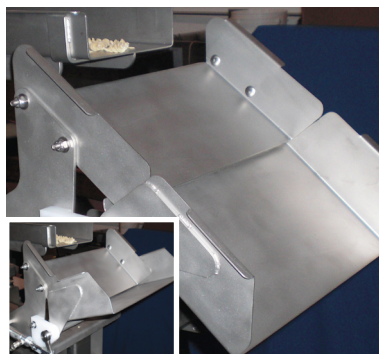
WEIGH MONITOR

A Continuous In-Line Weighing Feeder. It works like the Magna Weigh except there is only a weighing conveyor and no infeed vibratory conveyor. This is to report line throughput without controlling it. A 4-20 mA or 0-10 vdc signal may be generated to operate other devices as slaves to this unit, similar to the Magna Weigh. Rate output may also be scaled in engineering units to report the amount of product going over the conveyor in Lbs/Min or Kg/Hr, etc. This is more reliable, sanitary, and economical as compared to a weigh belt.



BLENDED SYSTEMS

Many blending systems as in the frozen vegetable industry consist of several hopper feeders that operate volumetrically. Using Crescent System components we can convert these feeders to gravimetric operation to enhance accuracy and repeatability. Using Magna Weigh Feeders for each product multiple products may be blended in exact proportion, by weight. The picture to the right shows two of the ten ingredient feeders employing Magna Weighs. In this case recipes were sent to the system via Ethernet network to select certain percentages for each of the ten ingredients. The system is very robust and is able to operate in extremes of temperatures and environment.



MAGNA CHECK

A patented In-Line Flow Rate Checking device to periodically report production rate of a process line, by weight. It may be employed independently by inserting it between two conveyors to report the rate of product flow. It may also be employed in conjunction with a weigh belt or Magna Weigh to report and correct throughput. In this case it may be used as a second check, eliminating the need for manual catch test to ensure the weighing device is functioning properly. It computes feed rate by sampling weight for a given amount of time and interval, providing feed rate information and sending correction signal if needed. This unit may be custom designed to suit particular application requirements.

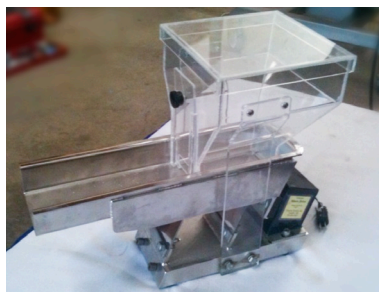
BAG & BOX FILLING

By combining platform scales, load cells, weigh buckets, vibratory feeders, and controllers, we can custom design equipment or Bag Filling applications. Instead of offering a standard piece of equipment which necessitates modifying your application to match the equipment, we offer custom solutions and can design the bag or box filling system to suit your application. We have considerable experience in bag filling systems and can confidently design and build these systems to meet your exacting requirements.



LOSS-IN WEIGHT FEEDERS

We offer Vibratory Loss-in-Weight Feeders, Screw Feeders, and Belt Feeders. Your existing feeders can be easily converted from volumetric to gravimetric by installing our weighing and control components. These feeders may run independently or in conjunction with our Weigh Monitor or Magna Weigh for a complete system. Several of these loss-in-weight feeders may be networked in a Master/Slave configuration. LIW Vibratory Feeders may be manufactured in various sizes to suit application.



CONTROL SYSTEMS

The heart of the Crescent Weighing systems are specifically designed controls to meet application requirements. Some applications may require simple relay logic for single function machine. In this case we may use our dedicated weight controllers for simplicity, cost, and ease of operation. Other applications may require PLC based systems with several pieces of equipment networked together to operate as a unit.

We use PLC and OIT components as may be standard for a certain customer's plant environment. This is helpful because the customer is generally familiar with those components and they would not have to hold special components in their inventory.

Systems may be completely prewired for ease of installation or left for the customer to wire components in the field. We provide complete documentation to ease installation and system operation.

Our panels are UL listed and wired conforming to NEC and other codes applicable to the jurisdiction where systems are to be installed. The panels may be NEMA-12, NEMA-4, or NEMA-4X depending upon the application.

Our Vibratory Feeders Controllers are specially designed to run the feeders at resonance. Feedback sensor are employed to precisely maintain stroke even under varying product load. This renders the controls smart as they always sense the pulse of the system and act accordingly to keep it running at top performance.

CUSTOM SOLUTIONS

Crescent Systems, Inc., has extensive experience in the weighing and material handling industry and we recognize that each new application has its own set of challenges and requirements. Rarely is there one product on the market that fits those needs without customization. With our knowledge, systems approach, and versatile conveyors, feeders, and controllers we know we can help customize a product solution to meet your requirements at a very reasonable price.

