



Loss-In-Weight Feeders

Continuous Dosing Systems



RICE LAKE[®]
WEIGHING SYSTEMS

www.ricelake.com



Loss-In-Weight Feeders

CONTINUOUS DOSING SYSTEMS

Loss-in-weight feeders are ideal dosing systems for a variety of applications from bulk, dry materials to liquids and even poorly flowing materials. Whether it's used in food or chemical production, high temperature or ATEX environments, Rice Lake Weighing Systems has a loss-in-weight feeder to meet your requirements.

Consistently Accurate Product Dosing

Loss-in-weight feeders consist of a hopper with a dosing unit, typically an screw or vibrating unit, all placed on load cells monitoring the amount of material output of the hopper during dosing. Dosing is measured in kilograms per hour (kg/hour) and the controller adjusts the speed of the dosing unit to match the setpoint, ensuring consistent product flow. This hopper on the dosing unit can be refilled manually or automatically from a storage hopper without impacting the flow rate or stopping production. The target flow rate for loss-weight-feeders is controlled by a setpoint, in this case the dosing capacity measured in kilograms per hour.

Fixed Dosing Systems

This loss-in-weight system is best for easy flowing, dry products with straightforward dosing. Dosing is typically done with a vibrating unit or an screw and optional paddles to gently agitate the materials and prevent product build-up. When paired with paddles, the screw and paddles can either operate from the same motor or separate motors, giving users complete control over the output of the dosing equipment.



SALES AND TECHNICAL ASSISTANCE



Flex Dosing Systems

Using a hopper with a flexible PU (polyurethane) insert, a flex dosing system is an ideal solution for products that are easily damaged or difficult to extract. Agitators move against the flexible walls of the hopper to keep product moving, ensuring there are no build-ups or compacted material. Dosing with this system is done with a screw, though the size and style of the screw is determined by the type of product and desired flow rate.

Liquid Dosing Systems

For continuous liquid dosing, a loss-in-weight feeder and pump are paired with a floor scale to precisely weigh the liquid as it fills a barrel or an IBC (intermediate bulk container). Similar to other loss-in-weight systems, the weight indicator controls the dosing speed of the pump. Because the container is connected to the pump through a flexible hose, the liquid travels straight out of the container providing greater accuracy than a standard flowmeter.

Loss-In-Weight Controllers

Rice Lake offers weight indicators and controllers that are ideal for use with loss-in-weight dosing systems. When paired with a fieldbus protocol, the setpoint from the PLC is sent to the controller to ensure accurate output using PID functions. When necessary, the controller adjusts the speed of the screw, vibrating unit or pump to maintain the requested capacity.

Whether you're dosing products for chemical processing, food manufacturing or anything in between, loss-in-weight feeders are ideal solutions to accurately measure material flow rates. If you need help finding the best system for your application, Rice Lake Weighing Systems' experts can answer all of your weighing and dosing questions.

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HEADQUARTERS
230 West Coleman Street
Rice Lake, Wisconsin 54868 - USA
Tel: (715) 234 9171 | Fax: (715) 234 6967

RICE LAKE WEIGHING SYSTEMS EUROPE B.V.
Weiland 11
NL-6666 MH Heteren - The Netherlands
Tel: +31 (0) 26 472 1319 | Email: europe@ricelake.com
www.ricelake.com