



MULTICOR CORIOLIS FLOW METERS

Accurate measuring and feeding of gypsum, stucco, fly ash, pulverized coal, pet coke, raw meal, and other pulverized fuel materials and dusts are essential for the production of high quality end products such as cement, lime, plaster, and gypsum wallboard. High accuracy, repeatability, reliability, and simplicity are some of the critical requirements of these measuring and feeding systems. SCHENCK's family of Multicor Coriolis flow meters were specifically designed to meet the needs of processors in these industries. By offering five different models of the Multicor, customers are assured of receiving a product that fits their particular application.

The Multicor is a robust, dust tight, in-line direct mass flow measuring device not influenced by variations in material properties, outside forces or plant disturbances. Installs almost anywhere for continuous flow rate measurement, totalizing, batch control, and continuous feeding. Space-saving, compact design requires no pre-bin, no flexible connections, and no counterbalancing or damping systems.

The Multicor Coriolis flow meter is the perfect complement to your manufacturing processes.

SCHENCK offers a variety of controls to use with the Multicor products for measuring, feeding, and automatic on-stream calibration. Fieldbus interfaces including Profibus, DeviceNet, and Modbus are also available.

Top 10 Reasons To Buy A Multicor

1. **Accuracy** – utilizing the benefits of Coriolis technology, very high and fast measuring accuracy is achieved.
2. **Compact Design** – perfect for applications with limited space requirements.
3. **Dust Tight Housing** – reduces the risk of air borne materials that may cause health and safety hazards.
4. **Direct Weighing Technology** – outside forces or typical plant disturbances have no effect on measuring and feeding accuracy.
5. **Repeatability** – changes in physical material properties do not influence the measuring result and system accuracy.
6. **Simple Verification and Calibration** – automatic on-stream check system allows for on-line verification and calibration without process interruption.
7. **Reliable** – robust construction ensures long-term operational reliability and minimal downtime.
8. **Low Maintenance** – efficient design with minimal moving parts requires virtually no maintenance.
9. **Simple Installation** – without complex platform structures, isolation devices, or external enclosures.
10. **Economical** – we challenge you to compare the total installed and operating costs of the Multicor to any other solution out there!

**For more information, please contact us at 1-800-401-9702 or Fax: 973-882-3796
E-mail: mktg@schenckamericas.com Web site: www.schenckamericas.com**



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KILN FEEDING

Accurate kiln feeding is essential to produce consistent high quality clinker. This Multicor Coriolis kiln feeding system provides reliable measurement and feed rate control. It is immune to external forces and assures minimal deviation for the highest kiln feeding accuracy.



ADDITIVE FEEDING

The ideal system for accurate, reliable, dust-tight feeding and blending of materials like fly ash, slag, and kiln dust. Automatic on-stream calibration with verifiable accuracy for precise, uninterrupted feeding and reduced downtime.

TYPICAL APPLICATIONS



STUCCO FEEDING

Accurately feeding stucco is critical to the manufacture of gypsum wallboard. If the boards do not meet a minimum weight they must be rejected, and overweight boards indicate a waste of raw materials in the form of "give-away". Therefore, having a precise feeding system helps eliminate waste in the gypsum wallboard manufacturing process.

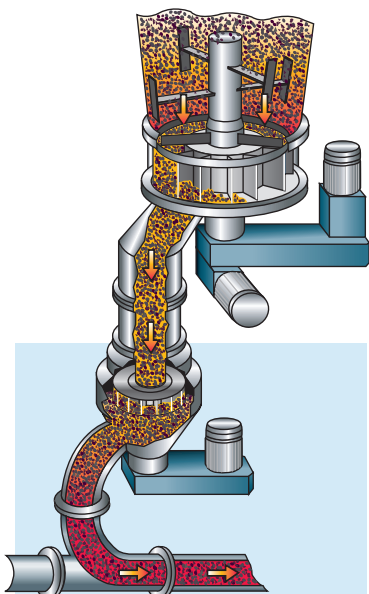


PULVERIZED COAL FEEDING

Pulverized fuel feeding accuracy is critical for economical, ecological operation of a cement kiln and production of high quality cement. This Multicor-K pressure proof 10 bar system delivers high short-term accuracy and reliable measurement immune to external forces.

PREFEED DEVICES

Combined with a suitable prefeed device, the Multicor makes an excellent mass flow feeding system. Selecting the optimum prefeed device based on the material characteristics and application requirements will ensure the highest short-term feeding accuracy and reliability. Some common prefeed devices are flow control gates, Multicell horizontal star feeders, rotary feeders, and screw feeders.

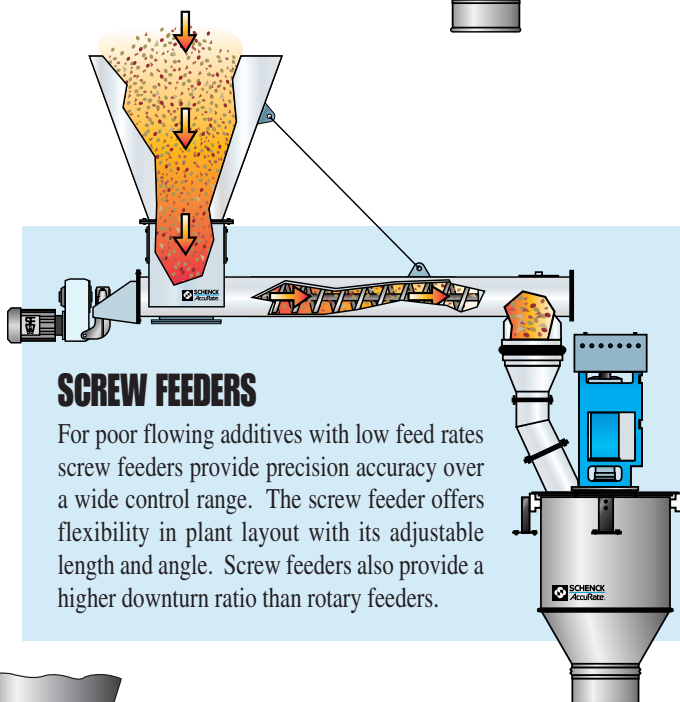
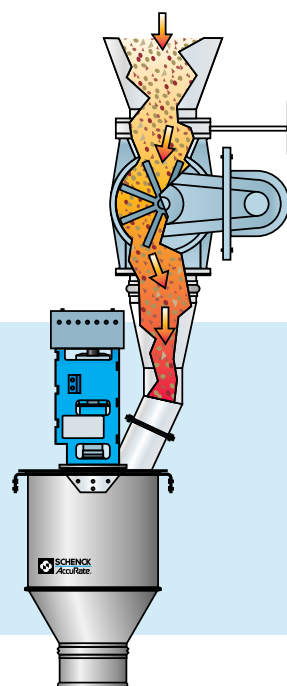


**MULTICELL
HORIZONTAL
STAR FEEDERS**

The Multicell Horizontal Star Feeder with integrated agitator is excellent for feeding pulverized materials including coal and pet coke at low feed rates. It provides excellent homogenization of the material, ensuring a pulsation-free discharge.

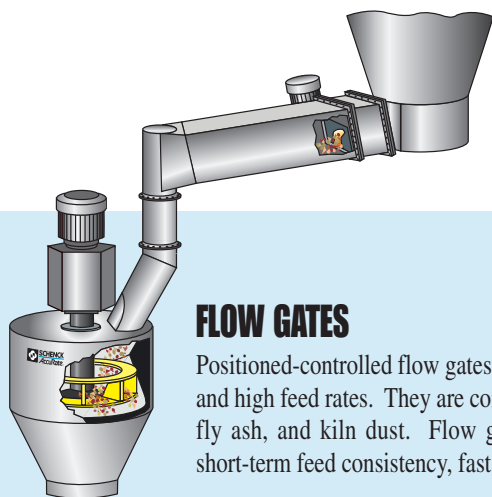
ROTARY FEEDERS

Rotary feeders are suitable for free to moderately free flowing materials at lower feed rates. They can be used when bin aeration is applied. Rotary feeders are also compact devices and have a low power rating.



SCREW FEEDERS

For poor flowing additives with low feed rates screw feeders provide precision accuracy over a wide control range. The screw feeder offers flexibility in plant layout with its adjustable length and angle. Screw feeders also provide a higher downturn ratio than rotary feeders.



FLOW GATES

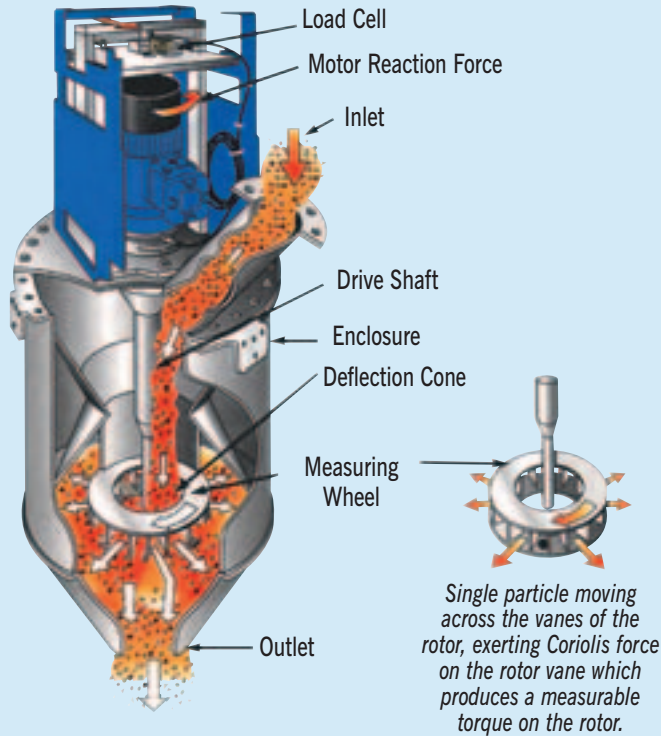
Positioned-controlled flow gates are ideal for free-flowing materials and high feed rates. They are commonly used for feeding raw meal, fly ash, and kiln dust. Flow gates also provide extremely high short-term feed consistency, fast response, and low maintenance.

THE CORIOLIS PRINCIPLE

SCHENCK's Multicor mass flow meter line uses the science of particle acceleration and its resultant forces to measure flow rate and total weight at accuracies of +/- 0.5% or better. Space efficiency and overall reliability make the Multicor an ideal choice for feeding, measuring, and batching applications involving reasonably free-flowing dry materials.

The Multicor consists of a partitioned measuring wheel, mounted on a drive shaft inside a central dust tight housing. The drive shaft is driven by an electric motor mounted outside the Multicor's housing. Material enters the unit through an off-center inlet and discharges through a center outlet below the measuring wheel.

In operation, the measuring wheel rotates at a constant speed. Material entering the unit flows into the top of the measuring wheel and is deflected outward in a radial direction creating a "Coriolis force." The Multicor sees this force as a change in torque which is detected by a strain-gauge load cell. The output of the load cell is electronically processed to produce flow rate and total weight values at accuracies of +/- 0.5%. Best of all, unlike other flow meters on the market, the Multicor's performance is not affected by material density, friction, or in-feed drop height.



FEED RATES:

- Model S-40: up to 40 m³/hr. (1,400 ft³/hr.)
- Model S-80: up to 80 m³/hr. (2,800 ft³/hr.)
- Model S-160: up to 160 m³/hr. (5,600 ft³/hr.)
- Model S-300: up to 300 m³/hr. (10,500 ft³/hr.)
- Multicor-K Pulverized Fuel Feeder: up to 60 m³/hr. (2,100 ft³/hr.)

FEEDER ACCURACY:

- Model S-40: ± 0.5% when measuring over 1 ton per hour
- Model S-80: ± 0.5% when measuring over 2 tons per hour
- Model S-160: ± 0.5% when measuring over 10 tons per hour
- Model S-300: ± 0.5% when measuring over 30 tons per hour
- Multicor-K: ± 0.5% when measuring over 1 ton per hour

TEMPERATURE LIMITS:

- Maximum material temperature is 130° C (266° F) for Multicor S models
- Maximum material temperature is 85° C (185° F) for Multicor-K Pulverized Fuel Feeder

OPERATING PRESSURE:

- Up to 5 mbar for the Multicor Model S units
- Up to 0.5 bar for the Multicor-K Pulverized Fuel Feeder