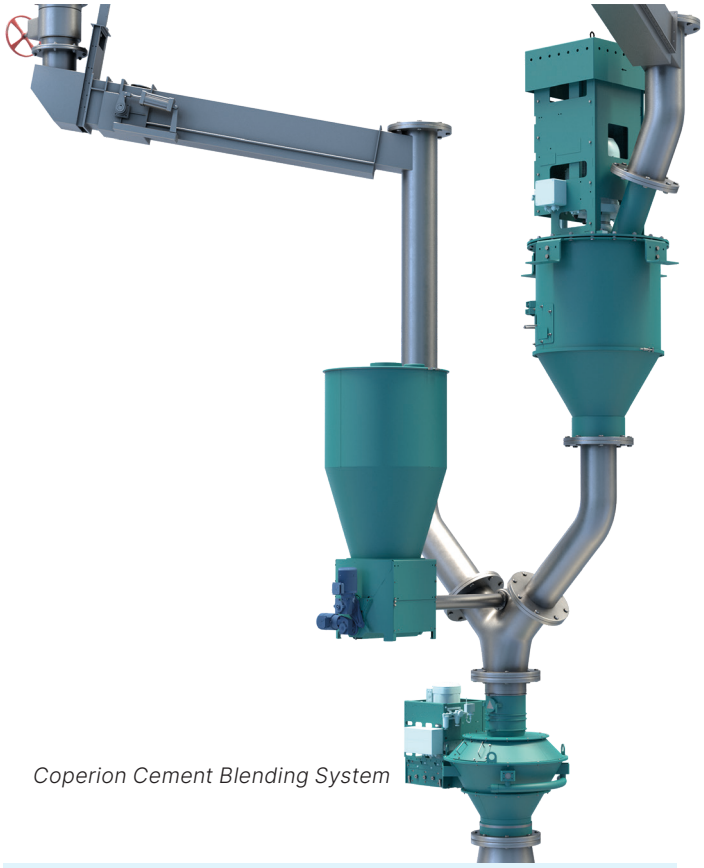
Cement Blending Systems
for on-demand delivery

Coperion Cement Blending Systems introduce a fundamentally different approach to cement production by shifting from a traditional "push" model to a more efficient, demand-driven system. Instead of producing and storing large volumes of cement, this solution is built around a "manufacturing pull" philosophy to produce exactly what is needed, when it is needed. This transition significantly reduces excess inventory, lowers operating costs, and improves responsiveness to changing customer requirements. By integrating precise feeding, real-time measurement, and continuous inline blending into a single streamlined process, the system delivers consistent, high-quality cement blends on demand while maintaining full process control.

Coperion's highly accurate process

At the core of this system is a coordinated set of technologies working seamlessly together. Material feeding begins with high-precision flow meters and feeders for additives such as slag, calcined clay, and fly ash with measurement accuracy as great as 0.5% and flow rates up to 900 tph. These systems are designed to handle even difficult, abrasive powders. This level of control at the input stage is critical, as it ensures that the foundation of every blend is consistent and repeatable.

Once materials are introduced, continuous real-time measurement takes over. Coriolis mass flow meters provide direct and highly accurate readings of mass flow, unaffected by variations in temperature, pressure, or density. This enables operators to monitor flow rates and composition as the process runs. The result is a dynamic system that can immediately detect and respond to any variation, ensuring precision throughout production and enabling accurate control over the final product.



Coperion Cement Blending System

Features and Benefits

- ↗ Maximum flexibility
- ↗ Superior accuracy and quality
- ↗ Eliminates excess inventory
- ↗ Lowers operating costs
- ↗ Improved production efficiency
- ↗ Designed for harsh environments
- ↗ Produces uniform blend
- ↗ Real time measurement

Our cement blending systems can process many different types of materials, including:

- ↗ Fly ash
- ↗ Slag
- ↗ Calcined clays
- ↗ Silica fume
- ↗ Other SCMs
- ↗ Cement

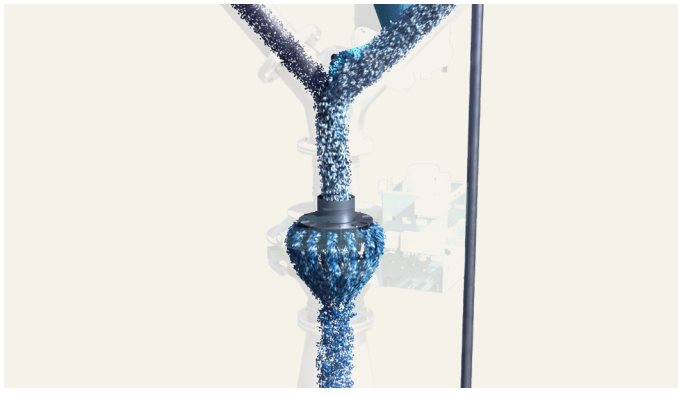
Innovative design
using the Coriolis principle

Blending occurs instream while the material is being conveyed, eliminating the need for a separate mixer. As materials move through the system, they are continuously combined, producing a uniform blend by the time they reach discharge. This approach simplifies the process, reduces equipment requirements, and improves overall efficiency while maintaining product quality. Because blending is integrated directly into the feeding stage, the system minimizes handling steps and potential inconsistencies.
All of these technologies support the system's ability to operate on a just-in-time basis. Cement blends are produced only when orders are received, and formulations can be adjusted instantly to meet different specifications. This flexibility allows producers to switch between product types without downtime, making it easier to respond to changing market demands and customer needs.

Mass flow meter H

Operational benefits

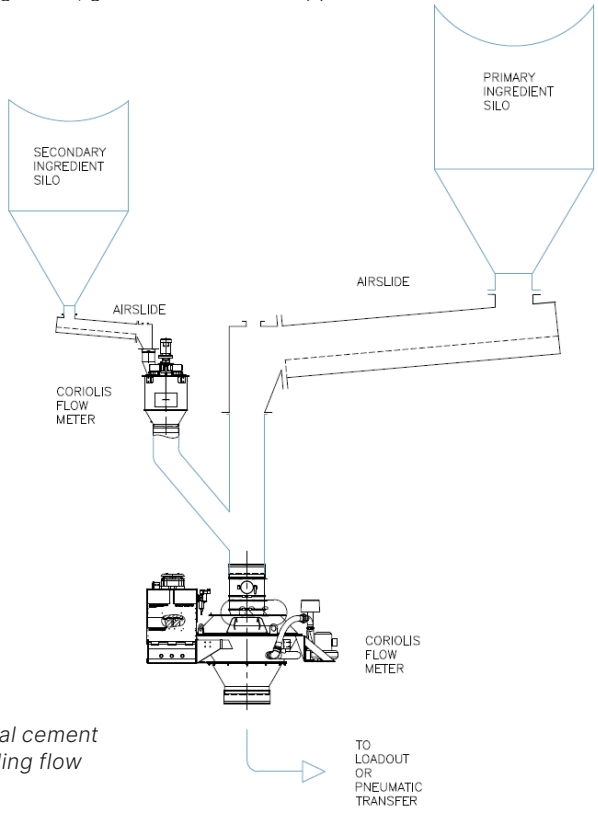
The result of using this system provides a range of operational benefits. By eliminating the need to store large volumes of finished product, producers can significantly reduce inventory costs and free up capital. The system's flexibility allows for rapid product changes without interrupting production, while the combination of precise feeding and accurate measurement ensures superior product consistency. Operating costs are further reduced through the elimination of dedicated mixers, lower energy usage, and decreased maintenance requirements. At the same time, the streamlined process improves overall efficiency, reducing waste and minimizing the need for rework.



Example of materials being blended in the mass flow meter

Engineering and product support

Coperion's systems are specifically engineered for the harsh conditions typical of cement production. Their robust design ensures reliable performance even when handling abrasive materials, supporting long-term durability and consistent operation. Backed by decades of industry expertise, Coperion provides fully integrated solutions encompassing feeding, weighing, conveying, and blending, along with project management, global service and support.



Typical cement blending flow

Conclusion

Coperion Cement Blending Systems enable producers to move away from storage-heavy, inflexible production models toward a lean, highly responsive process. Cement blends are produced only when orders are received, and formulations can be adjusted instantly to meet different specifications. By combining advanced technologies into a unified system, they deliver precise, on-demand blending that enhances efficiency, reduces costs, and provides complete control over cement production.

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