

H / V • DOSING SYSTEMS

Gravimetric Powder Dosing System

The automatic gravimetric powder dosing system weighs the PVC formulation under computer control, hands-free, transfers it to the mixer and carries the blend through to the extruders. Offered in Model H and Model V layouts.

A PVC recipe brings together many ingredients: resin, filler, stabiliser, lubricants, impact modifier and pigment, some of them dosed at well under one part per hundred of resin. Weighing all of that by hand is slow and invites mistakes. The Erk PVC Makine automatic gravimetric powder dosing system prepares the required formulation fully automatically under computer control. The recipe is weighed without manual handling, mixed and carried all the way to the extruders.

Why gravimetric?

Volumetric systems measure by volume, yet the bulk density of a powder can shift from lot to lot, with the fill level of the silo and with moisture. The same volume can mean a different weight on a different day. Gravimetric dosing weighs every ingredient directly, so density swings do not find their way into the recipe. The result is more consistent dry blend from batch to batch and less risk of drift in the minor additives, where small errors matter most. Our article on gravimetric vs volumetric dosing looks at when each approach is good enough and when it is not.

How the system runs

1. The operator selects the recipe on the computer.
2. Raw materials are drawn in sequence from silos and hoppers into the weigh hopper and weighed to the recipe values.
3. The completed batch is transferred to the heater-cooler mixer.
4. Once mixed and cooled, the material is conveyed to the extruders by the feeding system.



For the liquid stabilisers used in soft PVC, the automatic liquid dosing system works coupled with powder dosing, so powders and liquids are handled within one recipe.

Model H and Model V

Two layout options are available: Model H and Model V. Which one fits depends on ceiling height, the existing position of silos and mixers, the number of raw materials and access for maintenance. The dosing platform can be designed as a single structure together with the mixer below it. Whichever layout is chosen, the goal is the same: to bring raw materials to the scales, and from there to the mixer, by the shortest and cleanest route.

A cleaner way to produce

An enclosed, automatic dosing arrangement reduces the need to carry raw materials around by hand in the open. That helps limit dust in the production area and cut material losses. Erk PVC Makine designs these systems as part of an environmentally conscious approach to production.

Questions to answer at the start

- How many powder ingredients does the recipe contain, and what is their daily consumption?
- Do they arrive in big bags, sacks or by silo?
- How many mixers and extruders will be connected?
- Are liquid additives used?

The answers shape the project just as much for high-tonnage PVC door and window profile lines as for smaller lines with frequent recipe changes. For how powder dosing, mixing and extruder feeding come together as one project, see turnkey PVC mixing line; all weighing options are listed under dosing systems.

Applications

PVC door and window profiles

PVC drain pipes

PVC cable channels

PVC cable

PVC floor covering

PVC foil

Wood plastic composite panels (WPC)

Quotes and engineering support for your project

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<https://mikser.com.tr/en/product/automatic-powder-dosing-system>

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