

DOSING SYSTEMS

Liquid Dosing System

The automatic gravimetric liquid dosing system weighs plasticisers such as DOP and DOTP, and the liquid stabilisers needed for soft PVC, precisely and batch after batch. It is computer-controlled and works coupled with the powder dosing system.

In soft PVC recipes, liquid ingredients have a direct influence on how the compound behaves. Too much or too little liquid stabiliser can affect processability, heat stability and the properties of the finished product. The Erk PVC Makine gravimetric liquid dosing system weighs these liquids precisely and accurately as part of fully automatic, hands-free formulation preparation.

Dosing liquids by weight

The density of a liquid changes with temperature, and viscous liquids can behave differently in pumps and pipework. With volumetric metering, those variables can turn straight into error. In a gravimetric system the liquid is taken into a weigh vessel and measured by mass, so the kilograms written in the recipe match the kilograms that reach the mixer. Manual measuring, carrying buckets and spills disappear as sources of error. For a wider look at the two approaches, see gravimetric vs volumetric dosing.

Working with powder dosing

The system is computer-controlled and runs coupled with the automatic powder dosing system. When the operator selects a recipe, powders and liquids are prepared as parts of the same recipe and delivered in step with the mixer cycle. Recipe records can also be managed from a single point.

In a heater mixer, liquids are usually added once the resin has reached a certain temperature; warm PVC

particles take up liquid more readily, and the blend returns to a free-flowing powder. Adding the right amount at the right moment has a direct bearing on cycle time and on how well the finished dry blend flows. Automatic dosing helps that step happen the same way in every batch.

Typical lines

Liquid dosing comes into play on lines making plasticised and soft PVC products: PVC cable, hoses, floor coverings and foil fall into this group. In these recipes most of the liquid share is plasticiser such as DOP or DOTP, so weighing accuracy matters more as the plasticiser level rises. On the mixing side it can be planned together with an EPM-V vertical mixer or the EPM-H series, depending on capacity.

Points to clarify before the project

- How many different liquids does the recipe use?
- How do they arrive on site: drums, IBCs or bulk tanks?
- What is the liquid consumption per batch and per day?
- At which stage of the mixing cycle should the liquids be added?

Those answers are enough to size the weigh vessel, route the liquid lines and decide how the system pairs with powder dosing. All powder and liquid weighing options are listed under dosing systems.

Applications

PVC cable

PVC water insulation materials

PVC irrigation hoses

PVC shoe soles

PVC floor covering

PVC foil

PVC tarpaulin

Quotes and engineering support for your project

+90 212 623 00 50 • WhatsApp +90 539 336 64 04 • info@erkpvcmake.com.tr

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

