



The automatic batching system weighs, proportions and mixes multiple materials according to a recipe: the entire flow from feeding → conveying → weighing & dosing → batching & mixing → discharging is automated, eliminating human error and ensuring batch-to-batch consistency and product quality. It supports free proportioning of up to ten materials and pre-stored multi-recipe recall; the feeding and weighing sequence runs continuously without interruption, and the fully enclosed construction with automatic dust collection keeps the site clean and contamination-free, significantly reducing labour cost and material waste.

Two Dosing Methods: Gain-in-Weight — material is fed by the feeder into a weighing hopper and stops when the set weight is reached; it can receive virtually unlimited materials for simultaneous batching, requiring longer preparation time but offering economical investment. Loss-in-Weight — the loss-in-weight rate of material discharged by each feeder is weighed to control feeding; batching is fast and highly accurate, making it suitable for continuous production lines with demanding cycle times.

Key Features

- ◆ Multi-recipe storage and management with flexible batching values and intuitive operation
- ◆ Multi-stage feeding (high → medium → low speed → jog) approaching the setpoint for high dosing accuracy
- ◆ Gain-in-weight / loss-in-weight dosing methods selected by process cycle time
- ◆ Belt / screw / vibration feeding options + high-precision flow control
- ◆ Air-cushion / agitation / vibration arch-breaking devices prevent segregation and ensure uniform mixing
- ◆ Fully enclosed + automatic dust collection; PLC control with host computer / MES integration for traceability

System Composition

Charging Equipment Small bag dump station / big bag unloader / small bag unpacking machine / container unloading

Buffer Vessel Activation hopper, agitation, vibrator assisting discharge

Weighing Module Load cells + weighing indicators

Control System PLC automatic control + electrical components

Conveying Equipment Vacuum feeder / positive-pressure dense-phase / dilute-phase conveying systems

Feeding Equipment Screw / vibration feeders controlling the discharge rate

Dust Collection Equipment Exhaust dust collection with automatic powder recovery

Dosing Method Gain-in-weight / loss-in-weight dosing

Tare and zero → Dose material A → Dose material B ... → Cumulative target reached →

Discharge to mixing / packing

◆ Optional configurations: arch-breaking devices (air cushion / agitation / vibration), signal protection shielding, level indicators, upgraded weighing modules, explosion-proof electrical components, etc.