

SPECIAL MIXERS

Metallic Bonding Mixer

The metallic bonding mixer is designed for producing metallic powder coatings by the bonding process. It attaches flake pigment such as aluminium or bronze to the powder particles at a controlled temperature, in a gentle process that calls for both process and product expertise.

In metallic powder coatings, flake pigments such as aluminium or bronze give the finish its sparkle and depth. If those flakes are simply dry-blended with the powder, they can separate from the coating particles in the gun and the booth during application. Reclaimed powder then has a different make-up, and the coated surface may show patchy colour. Bonding aims to prevent that separation by fixing the pigment to the surface of each powder particle.

How bonding works

In general terms, the powder coating and metallic pigment are brought under controlled agitation to a temperature close to the point where the coating begins to soften. The particle surface becomes slightly tacky and the flakes adhere to it; the batch is then cooled to lock the bond in place. Too much heat and the particles stick together into lumps; too much mechanical force and the flakes break, losing the metallic effect. That is why bonding is regarded as one of the gentlest processes used in preparing powder coatings.

Engineering meets experience

Erk engineers have experience developing solutions to mixing problems of many kinds, and the metallic

bonding mixer applies that know-how to powder coating preparation. Care and consistency at every stage of the process are a precondition for the quality of the final product. Producing metallic powder coatings by bonding demands a high level of expertise in both process development and product development, so the machine is configured with the specific coating system and pigment in mind.

Getting a project started

When planning a bonding mixer, the following points should be clarified early:

- The resin system of the powder coating and how it softens
- The type and proportion of metallic pigment
- Target batch size and daily output
- Dust collection and handling of extracted air

Fine metallic powders need to be kept under control, so jet filters and auxiliary equipment can be included in the project. For more on the application itself, see metallic powder coating (bonding). To see where a bonding mixer sits among other mixer types, read our industrial mixer types and selection guide or browse special mixers.

Applications

Metallic powder coating (bonding)

Quotes and engineering support for your project

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<https://mikser.com.tr/en/product/metallic-bonding-mixer>