

Technical Note

Volumetric Mixers (a.k.a. Mobile Mixers)

What is a volumetric mixer?

A volumetric mixer is a mobile mixer that allows the batching, measuring, mixing and pouring of concrete at a jobsite. Volumetric mixers are available in different sizes and can be configured for the desired need. A typical volumetric mixer has a carrying capacity of 8 - 10 yd³ [6.12–7.56 m³] of concrete. An example volumetric mixer is shown in the figure on the right.

How it functions?

The raw materials for producing concrete for single, or multiple stop projects are on board the mobile mixer and stored in separate containers. These mixers are designed to carry sand, stone, cement, water, admixtures, fiber, and coloring agents in separate compartments and dispense the exact amount needed at the job site without waste. Tanks on the volumetric mixer provide the ability to incorporate different unique admixtures into the concrete to enhance performance. The materials are weighed and combined (mixed) by a screw auger, in proportions developed for the application and desired performance, and then discharged into the form or placement vessel at the jobsite. A delivery ticket or batch ticket is furnished after each increments of discharge describing dates, times, mix designs, names of the supplier and purchaser, volume of concrete produced and other pertinent information.

Placement – depending on the size of the volumetric mixer, placement rates are generally between $15-90 \text{ yd}^3/\text{hr} [11-69 \text{ m}^3/\text{hr}]$

Specifications – concrete provided by volumetric mixers must meet ASTM C685/685M Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing



Advantages of a Volumetric Mixer

- A complementary alternative to ready-mixed concrete
- Ability to accommodate "short loads" (less than a full truck)
- Batch different mix designs at multiple stops in a single day
- Delivery to remote locations
- Minimal waste batch only what is needed

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