

Concrete-Mate, the electronic weighing system by Carmix for perfect Mix-Design control

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With over 40 years' experience, **Carmix** has helped to revolutionize the concrete industry thanks to continuous technical innovation and the development of digital technologies that simplify on-site operations. One example is Concrete-Mate, a load-cell electronic weighing system that weighs the concrete mix directly inside the drum. Unlike many weighing systems in the market where a hydraulic weighing system is installed on the bucket, the one designed by Carmix is unique as it is equipped with four electronic load cells on the drum bottom, providing extremely accurate data on concrete quality.

Concrete-Mate, the electronic weighing system with smart load cells and printer

Available only on the Carmix 3500 TC model, this load-cell electronic weighing system allows the operator to simultaneously dose and check all aggregates as they are loaded inside the drum, including water. This simplifies the control of each aggregate, reducing dosing error. In addition, the system can store up to 15 different Mix-Designs with up to 99 components at a time. When loading is complete, the PC in the control cabinet automatically prints a ticket with all data, which can be saved on a USB stick as well.

Concrete-Mate, the digital Mix-Design Manager that has revolutionized concrete production

Launched in 2017 to improve the quality of the concrete output by Carmix machines, Concrete-Mate is an innovative digital Mix-Design Manager running a standard RMC Plant-level management software that applies 4 load cells inside the mixing set and guarantees a top quality concrete mix in compliance with international concrete standards (UNI 206-1 - ASTM – ACI, etc.). Concrete-Mate is a digital revolution in concrete production and adds to those values that have always characterized Carmix philosophy: to offer a self-loading concrete batching plant, able to prepare concrete how, where and when you want.

Innovative digital technology for a certified, perfect Mix-Design

Concrete-Mate allows up to 15 different mixes and 99 types of materials to be selected. Multiple combinations can be created with these elements, based on the construction site. Once the desired mix design has been stored, the software suggests the doses for each element, the sequence of operations and the time needed for each process step, thus eliminating any potential error. The four load cells act as weight sensors directly where the mix is made. Compared to systems that use pressure sensors on the loader, this system guarantees direct control of components right where the mix is made (including the weight of water, for an optimal W/C ratio), greater accuracy and a maximum 2% weight deviation, as in the most sophisticated concrete plants. Monitoring of finished product and check of the operator's performance add to this superior performance. Concrete-Mate adapts the concrete recipe to moisture content input, by automatically recalculating the W/C ratio.

Monitoring of running, quality and operating costs from website and App

With its full digitization, Concrete-Mate allows individual operations to be quality controlled. Actually, the software issues a certificate with all analytical Mix-Design data at the end of process, including client name, construction site, operator name, as well as the mixing time, any deviation between loaded and virtual weight and a total weight check. Furthermore, Carmix has developed a monitoring system from website (IPOTweb) and from App (IPOTAPP) for an accurate monitoring of concrete output, product quality and running costs, ensuring a clear, immediate return on investment for CARMIX machines.

Source: CARMIX