

Al Falah Ready Mix Uses Elettrondata's Automation to Meet High Ready-Mix Concrete Production Demands



The ready-mix concrete (RMC) production industry is a hyper-competitive business that delivers materials for construction projects that must arrive at the site on time while meeting strict product tolerances. Any deviation from on-time delivery or reduced quality of the product can result in lower profits and, in many cases, lost future orders for RMC producers. Automation in RMC plants is proving to be critical in enabling RMC producers to maintain repeatably high-quality concrete that gets delivered to the project site at the right time.

Al Falah Ready Mix is a proven example of how automation of concrete production is delivering successful business results. In partnering with Elettrondata, Al Falah Ready Mix is reaping the benefits of their decision to deploy Elettrondata's suite of hardware and software products that automate production and improve the quality, reliability, and timeliness of the different varieties of concrete mixes their customers' projects demand.

Within months of the upgrade of two of their plants, Al Falah Ready Mix began seeing a significant return based on production rates rising and returned loads declining.



The net result: Al Falah RMC affirmed their leadership reputation for being a highly reliable producer of top-quality concrete mixes for use in a wide variety of construction projects in the Middle East and North Africa (MENA) region.

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Elettrondata is a highly valued partner in our ready-mix concrete business operations. Their experience, knowledge, and capabilities inspire us, and the production success we have in our RMC operations confirms that our selection of Elettrondata for plant automation was the right decision.”

— **Sultan Al Falah, CEO, Al Falah Ready Mix**



The Client

Founded in 1997, Al Falah Ready Mix is a well-established market-leading producer of RMC in UAE, and, as a growing company in a hyper-competitive industry, Al Falah Ready Mix is continuously seeking out new capabilities and technologies to improve operations. Al Falah Ready Mix is a key contributor to the rapid growth of construction in UAE, GCC, and MENA, including:

- Masdar projects
- Al Dar projects
- Nakheel projects
- Abu Dhabi International Airport projects
- Kingdom of Saudi Arabia Ministry of Interior projects
- Riyadh Metro project
- Yanbu Power and Desalination Plant project
- Doha Metro project
- Supreme Committee for Delivery and Legacy projects in Qatar

With the commitment to its customers to provide high performance without compromise, Al Falah Ready Mix embarked on a global search for top-line ready mix plant automation software and quickly found that Elettrondata provided the best of the best.

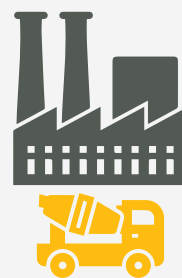
The Elettrondata Solution

To meet the needs of Al Falah Ready Mix, Elettrondata collaborated with the Al Falah team and visited their plants to identify the requirements for their operations – including the different bins that contain a variety of raw materials and the types of systems that transport the components to the mixer. From this analysis, Elettrondata created a tailored system to support and

The Need

Al Falah Ready Mix needed to resolve several challenges:

- Improve consistency of delivered products to meet government compliance requirements.
- Eliminate errors and downtime from existing systems.
- Increase the repeatability of desired mixes while increasing production capacities.
- Grow production capacities to meet project construction needs in the UAE, Saudi Arabia, Qatar, Egypt, Oman, and Rwanda.
- Reduce losses from returned concrete loads that did not meet specifications
- Enable undisrupted 24/7 production.



Al Falah Ready Mix currently operates **42** sites in the MENA region, with a collective production capacity that exceeds **26,000** cubic yards of RMC per operating day, i.e., more than **7.8 million** cubic yards per year.

“

The growth in our market demands that we operate efficiently and consistently day and night. The unique flexibility of Elettrondata's solution allows us to synchronize and optimize our production of orders without the need to halt production to change the mix. ”

— Ashraf Lodhi, Director of IT Systems, Al Falah Ready Mix



control the aggregates, admixtures, cement types, and water sources used in their production of any ordered concrete mix. The unique flexibility of the eBatch system allows the plant operator to synchronize and optimize concrete production schedules even when batch mixes change. While a batch mix is coming to the end of its processing, eBatch loads the new formula and begins preparing raw materials for the new batch process, which improves production time of the plant.

At each facility, Elettrondata's eBatch solution connects to Elettrondata's ePanel, which contains programmable logic controllers that respond in real-time to directions from eBatch to manage the contributions of the wide variety of raw materials:

- Six aggregates in one or two scales
- Six admixtures in one to three scales
- Four cement types (including micro-silica) in one or two scales
- Three moisture components, with scales for clean water, recycled water, and ice

In addition to the need for a highly flexible system, Al Falah Ready Mix required a robust platform. Prior systems that the producer employed did not provide continuous operations.

Not only was Al Falah Ready Mix forced to stop production when changing the components in the bins before producing new orders, but the computer system often required Al Falah Ready Mix to perform maintenance tasks. With the growing demand for concrete from its customers, Al Falah Ready Mix needed a system that could run continuously to support 24/7 operations without these operational headaches. To date, Al Falah Ready Mix is meeting its customer orders with the high-quality products their project builders expect on time.

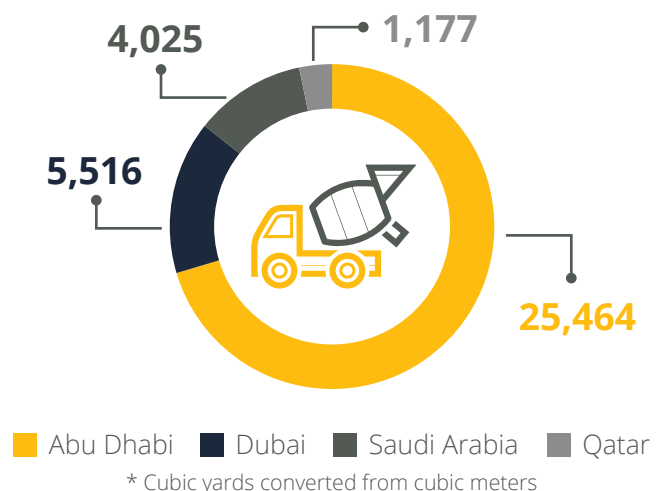
The Result

Elettrondata eBatch quickly proved beneficial to Al Falah Ready Mix. The smooth, consistent operation experiences in the initial two deployments in 2016 convinced Al Falah Ready Mix to deploy new plants with Elettrondata's eBatch. These plants contributed to the concrete used in the following mega projects:

- Seven mega projects in Saudi Arabia
- Six mega projects in Abu Dhabi
- Three mega projects in Dubai
- Two mega projects in Qatar

Elettrondata's eBatch system provides a key component in Al Falah Ready Mix's concrete production business. From the first installed system to the 31 systems in operation today, eBatch is controlling plants that not only produce the necessary volume of ordered concrete at the time of order but also generate the requisite reports that have helped Al Falah Ready Mix successfully pass every quarterly government audit for the past five years.

Mega Concrete Production, Al Falah Ready Mix (1,000 Cubic Yards*)



About Elettrondata

Elettrondata provides state-of-the-art hardware and software automation tools and management solutions that help ready-mix and precast plants achieve 24/7 production, gain unmatched operational flexibility, and deliver high-quality concrete every time on-time. With over 40 years of experience, Elettrondata has successfully implemented thousands of integrated automation systems for concrete producers globally and provided end-to-end customized solutions comprising feasibility analysis, technology design, software programming, installation, on-site testing, and after-sales support.

Elettrondata manufactures a wide range of hardware and software solutions including humidity probes, weight indicators, control panels, batch automation, quality control, quality assurance, slump monitoring, and dispatch management system. The portfolio provides plant operators with the utmost flexibility to modernize their system intelligently, get better visibility and controls to maintain high quality consistently, enhance production efficiency, and optimize business processes.



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