CORE CONCEPT

# Ready-Mix Concrete Plant Operations Course: Batching, Truck Mixer Fleet and Dispatch

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## Introduction:

Ready-mix concrete plant operations, covering batching, truck mixer fleet and dispatch, is a 1-week course for plant, production control, dispatch and fleet teams in ready-mix companies and contractors' in-house plants that ends with a Plant Operations and Dispatch Improvement Plan for a case company. Ready-mix businesses lose margin when scales drift, aggregate moisture goes uncorrected, trucks queue or wait on site, and loads come back unused. Nominees already run, supervise or schedule a batching plant or delivery fleet and learn through a modelling build of fleet and cost figures. CoreConcept Training Center delivers this ready-mix plant course.

## Course Objectives:

- Compare central mix, dry batch transit mix and volumetric supply and map the order-to-cash flow of a ready-mix plant
- Calibrate weighing equipment, control aggregate, cement and admixture storage and apply EN 206 factory production control and ASTM C94 batching requirements
- Correct batch water for aggregate moisture, check batch tolerances per constituent and audit batch control system records
- Schedule orders on a dispatch board, space loads to the pour rate and calculate truck mixer cycle times
- Reduce returned and waste concrete, plan hot-weather deliveries and track plant utilisation and margin per cubic metre
- Build a fleet sizing and plant profit model and a Plant Operations and Dispatch Improvement Plan for a case company

## Target Audience:

- Plant management teams responsible for output, cost per cubic metre and customer service at ready-mix plants
- Batching supervision teams responsible for scale accuracy, material stocks and batch records
- Dispatch and order desk teams responsible for taking orders, scheduling pours and spacing truck loads
- Fleet management teams responsible for truck mixer availability, drivers, maintenance and haul productivity
- Plant quality teams responsible for production control, sampling and conformity of delivered concrete
- Contractor plant teams responsible for running in-house batching plants on large construction sites

## Course Outline:

### Day 1: Ready-Mix Business Model, Plant Types and Operational Baseline

- Central Mix Versus Dry Batch Transit Mix Plant Configurations
- Volumetric Mixer Trucks and Mobile Batching Plant Use Cases
- Ready-Mix Order-to-Cash Flow From Enquiry to Invoice
- Cost per Cubic Metre Build-Up for Materials, Haulage and Overheads
- Plant Baseline Review Using Delivery Tickets and Production Logs

### Day 2: Batching Plant Equipment, Materials Storage and Production Control Standards

- Aggregate Bins, Weigh Hoppers, Cement Silos and Screw Conveyors
- Load Cell Scale Calibration With Test Weights and Records
- Aggregate Stockpile Segregation, Contamination and Bin Separation Controls
- Admixture Dispensers, Dosing Pumps and Silo Level Monitoring
- EN 206 Factory Production Control and ASTM C94 Batching Clauses

### Day 3: Batching Accuracy, Moisture Correction and Truck Mixer Dispatch

- Sand Moisture Probes and Free Water Batch Correction
- Batch Tolerance Checks Against Target Weights per Constituent
- Batch Control System Tickets, Manual Overrides and Audit Trails
- Dispatch Board Order Intake, Pour Scheduling and Load Spacing
- Truck Mixer Cycle Time Calculation From Loading to Washout

### Day 4: Delivery Risks, Returned Concrete and Plant Performance Control

- ASTM C94 Discharge Time and Drum Revolution Limits
- Hot-Weather Delivery Planning for Haul Distance and Night Pours
- Returned Concrete Reclaimer Units and Washout Water Reuse
- Plant Quality Sampling, Strength Conformity Tracking and Nonconformity Logs
- Plant Utilisation, Truck Productivity and Margin per Cubic Metre

### Day 5: Modelling Build of the Plant Operations and Dispatch Improvement Plan

- Case Company Brief With Plant, Fleet and Order Data
- Truck Mixer Fleet Sizing Model From Cycle Times and Demand
- Calibration and Moisture Findings Applied to the Case Plant
- Plant Profit and Loss Model by Customer Segment
- Plant Operations and Dispatch Improvement Plan Completion

## Skills You Will Gain:

- Batching Plant Configuration Assessment
- Weighing System Calibration
- Aggregate Moisture Compensation
- Batch Record Auditing
- Concrete Dispatch Scheduling
- Truck Mixer Fleet Sizing
- Returned Concrete Reduction
- Ready-Mix Cost Modelling

## Why Attend This Course:

- Deliver a Plant Operations and Dispatch Improvement Plan for a case company to the plant manager, the dispatch lead and the commercial manager
- Decide how many truck mixers a given order book needs and which plant losses to remove first
- Avoid rejected loads, idle trucks, scale drift penalties and returned concrete that erode the margin per cubic metre
- Pass on calibration checklists, dispatch board rules, cycle time sheets and cost models to batching and dispatch staff

## Conclusion:

Back at work, the participant hands the plant manager, dispatch lead and commercial manager a Plant Operations and Dispatch Improvement Plan with calibration routines, moisture correction rules, dispatch scheduling rules, a fleet sizing model and a cost per cubic metre model. Management uses it to decide fleet size, plant shift patterns, pricing floors and where to spend on equipment upgrades. After the first full month under the plan, the team should compare cycle times, truck utilisation, returned volume, batch tolerance exceptions and margin per cubic metre against targets and reset the rules where results diverge.

## Frequently Asked Questions FAQ:

### What should participants know before a ready-mix concrete plant operations course?

Participants should already work in or with a batching plant, dispatch office or truck mixer fleet and read delivery tickets and batch reports. No engineering degree is needed. Bringing anonymised cycle time, batch or returned concrete records helps apply the modelling build to their own plant.

## How does ready-mix concrete plant operations differ from a concrete mix design or concrete pumping course?

It covers running the plant and fleet: weighing equipment, moisture correction, production control, dispatch, cycle times, returned concrete and plant economics. Mix design courses cover proportioning and trial mixes, and pumping courses cover placing concrete on site, which this course leaves aside.

## Why do truck mixer cycle times matter so much in ready-mix concrete plant operations?

Cycle time decides how many loads each truck mixer delivers per shift, so it drives fleet size, haulage cost and whether pours stay continuous. Long waits on site or queues at the plant raise cost per cubic metre and shorten the time concrete stays workable.

## What do participants take back from the ready-mix concrete plant operations course?

Participants take back a Plant Operations and Dispatch Improvement Plan for a case company, with a calibration checklist, moisture correction rule sheet, dispatch board template, fleet sizing model and cost per cubic metre model to adapt to their own plant.