

Engineered Products Concrete Batch Plant Questionnaire

CB-1 Standard Features

Please Familiarize yourself with what the CB-1 can do by reading the manual and looking over the following details before answering the questions.

▼ Ingredients

- 4 aggregates (single speed batching with auto-jog), 4 of 6 optional
- 3 cements (dual speed batching with auto-jog)
- 1 water-direct metering or pre-meter into reservoir via pulse meter input, weighed water option available
- 6 admixtures (bottle or direct, line stay full or line blowout via pulse meter input)

▼ Mix Designs

- 100 mix designs standard
- Mixes designed as 1 cubic yard (or 1 cubic meter) basis
- Batch in primary or secondary units
- 4 of 4 aggs, 3 of 3 cements, 6 of 6 admixtures, and water per mix design

▼ Configuration Parameters

- Editable names for ingredients and mix designs
- Individual preacts or coast values for all ingredients
- 2 different jog modes, jog-on timer, jog-off timer
- Individual over and under tolerances for each ingredient
- Volume per pulse conversions for metered ingredients
- Delayed discharges to "ribbon" aggs, cements, water, and admixtures
- Zero tolerance values for each scale

▼ Reporting

- Requires 80 column RS-232 (serial communication interface) printer
- Automatically prints batch ticket, may reprint last batch ticket before next batch is started
- Material usage reports
- Mix design reports
- Print system configuration

▼ Preparing a Batch

- Enter mix design number or select from a list
- Enter amount to batch. 3.00, 8.50, 4.33, 0.25 cubic yards (cubic meters) for example.
- Adjust water target (adjustments are printed on batch ticket)
- Add admixtures to this batch without changing stored mix design
- Prompt for Truck ID (if so configured)
- Prompt for Job ID (if so configured)

▼ Automatic Preact Compensation Algorithm (Learned Freefall)

▼ Precision Control of Inching Gates for Aggregate and Cement Discharge

▼ Split Batching

▼ Auto Jogging

▼ Gross, Ideal Targets, and Net Mode batching

▼ Material Usage Accumulators

▼ Passcode Protection

▼ U.S. or Metric Units as Primary

▼ Aggregate Moisture Compensation

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Drawing of Plant:

Please include location of all moving parts (gates, conveyors, augers), sensors, load cells, bins, silos, water, and admixture lines. (A drawing helps show system. Please include.)

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Questions:

▼ Input and Output Requirements:

1. Please circle all the inputs that apply to this system. Does your concrete plant provide any other 120V or 240V inputs (sensors, switches, limit switches, photo eyes) not specifically mentioned in the following list? Please write them down here.

admix 1 bottle empty	admix 1 pulse meter
admix 2 bottle empty	admix 2 pulse meter
admix 3 bottle empty	admix 3 pulse meter
admix 4 bottle empty	admix 4 pulse meter
admix 5 bottle empty	admix 5 pulse meter
admix 6 bottle empty	admix 6 pulse meter
water reservoir empty	ok to discharge
water pulse meter	cement discharge gate closed
aggregate discharge gate closed	manual mode
aggregate conveyor is running	

2. Please circle all the outputs that apply to this system. Does your concrete plant require any other 120V or 240V outputs (air solenoids, vibrators, aerators, motor starters, horns, lights) not specifically mentioned in the following list? Please write them down here.

cement 1 fast fill	cement 1 slow fill
cement 2 fast fill	cement 2 slow fill
cement 3 fast fill	cement 3 slow fill
aggregate 1 fast fill	aggregate 2 fast fill
aggregate 3 fast fill	aggregate 4 fast fill
water fill	
cement discharge gate open	cement discharge gate close
aggregate discharge gate open	aggregate discharge gate close
cement hopper vibrator	aggregate hopper vibrator
aggregate conveyor	lower dust schroud
water high discharge	water low discharge
mixer discharge	mixer run
system alarm	
admix 1 fill	admix 2 fill
admix 3 fill	admix 4 fill
admix 5 fill	admix 6 fill
admix 1 discharge	admix 2 discharge
admix 3 discharge	admix 4 discharge
admix 5 discharge	admix 6 discharge

- ▼ Does your plant require any inputs or outputs that are not 120V (240V)? _____

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Questions: (Cont.)

▼ General Information:

1. Is this controller being installed to batch in metric or U.S. as the primary units? _____
2. What is the maximum plant batch size capacity in cubic yards (or cubic meters)? _____

3. What is the minimum plant batch size capacity in cubic yards (or cubic meters)? _____

4. What are the capacities and divisions for the aggregate and cement scales? _____

5. What information do you require on the batch ticket? _____

6. Do you want to have the CB-1 keep track of current inventory of material or only material usage? _____

▼ Weighing and Moving Aggregates and Cements:

1. Does your plant use the same weigh hopper to weigh aggregates and cements? (If yes, explain order of adds) _____

2. Does your plant use more than 2 weigh hoppers (one for aggregates and one for cements)? _____
3. Does your plant weigh aggregates or cements by loss in weight (surge/holding hopper is on load cells)? _____
4. Does your aggregate require any equipment to move it from a surge bin into the weigh hopper other than a feed gate and gravity? _____

5. Does your aggregate require more equipment than a single conveyor and a discharge gate to move it to the truck or mixer? _____

6. Does your cement require any equipment to move it from a silo into the weigh hopper other than a feed gate and gravity or auger? _____

7. Does your cement require any equipment to move it from the weigh hopper into the truck or mixer (other than a discharge gate and gravity)? _____
8. Is the aggregate discharge gate on the weigh hopper **NOT** an "inching gate" type? In other words, does the discharge gate for the aggregate only requires power to open it, and closes automatically when the power to open it is removed? _____

9. Does this plant have a limit switch on the aggregate discharge gate? _____
10. Is the cement discharge gate on the weigh hopper **NOT** an "inching gate" type? In other words, does the discharge gate for the cement only require power to open it, and closes automatically when the power to open it is removed? _____

11. Does this plant have a limit switch on the cement discharge gate? _____

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Questions: (Cont.)

▼ Water and Admixtures:

1. Do you weigh your water instead of using a pulse meter? If yes, contact RLWS for information on weighed water option. _____
2. Do you use more than one water supply? If so, are the waters metered through different water meters? _____

3. Does your process use more than 2 water additions? Standard is one large water addition before and/or during the aggregate discharge and a holdback/tail water addition after aggregates and cements have been discharged completely (both scales to zero). _____

4. If you use a water reservoir, does it have only 1 discharge valve? If so, how is the washdown water added? _____

5. Will you use one single separate piece of equipment to meter and add water to the mix? If so, how and when is this device activated? _____

6. How many admixtures does this system use (6 is the default maximum)? _____

7. Will you use one single separate piece of equipment to meter and discharge your admixtures? If so, how and when is this device activated? _____

▼ Central Mix, Pre-cast and Block Plants

Does this installation use a concrete mixer of some sort (other than a truck for in-transit mix)? If you have a mixer:

1. What type is it? _____
2. Do you have more than one mixer? If yes, how are the different mixers charged by the same plant? _____

3. What input/output lines are required to charge it? Start it mixing? Tilt it? Discharge mix from it? Please explain the details of the mixer and the mix cycle. _____

4. Is there only 1 mix cycle of x time required from the time it was charged to the time it is discharged? _____
5. How should "pause" and/or "error" conditions effect the duration of the mix time? Should the mixer ever be turned **OFF** with cement in it? _____
6. Once the concrete is discharged from the mixer does the CB-1 need to move it to a block press or skip hopper? Explain how this is accomplished _____

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Questions: (Cont.)

▼ Central Mix, Pre-cast and Block Plants: (Cont.)

7. Do you need the CB-1 to start pre-weighing another batch while the current batch is being mixed? If yes, then this is a continuous operation. Explain in detail how the CB-1 will know it is ok to charge the mixer? When is the mixer done discharging? When is the block press ready for more material? _____

If you answered yes to any of the previous questions, there is a good chance that the CB-1 standard product will need a custom software modification. Some standard options are available.

Please volunteer any additional information about this application, or ask any questions you have about the CB-1's capabilities here. Thank you for taking the time to answer these questions.