

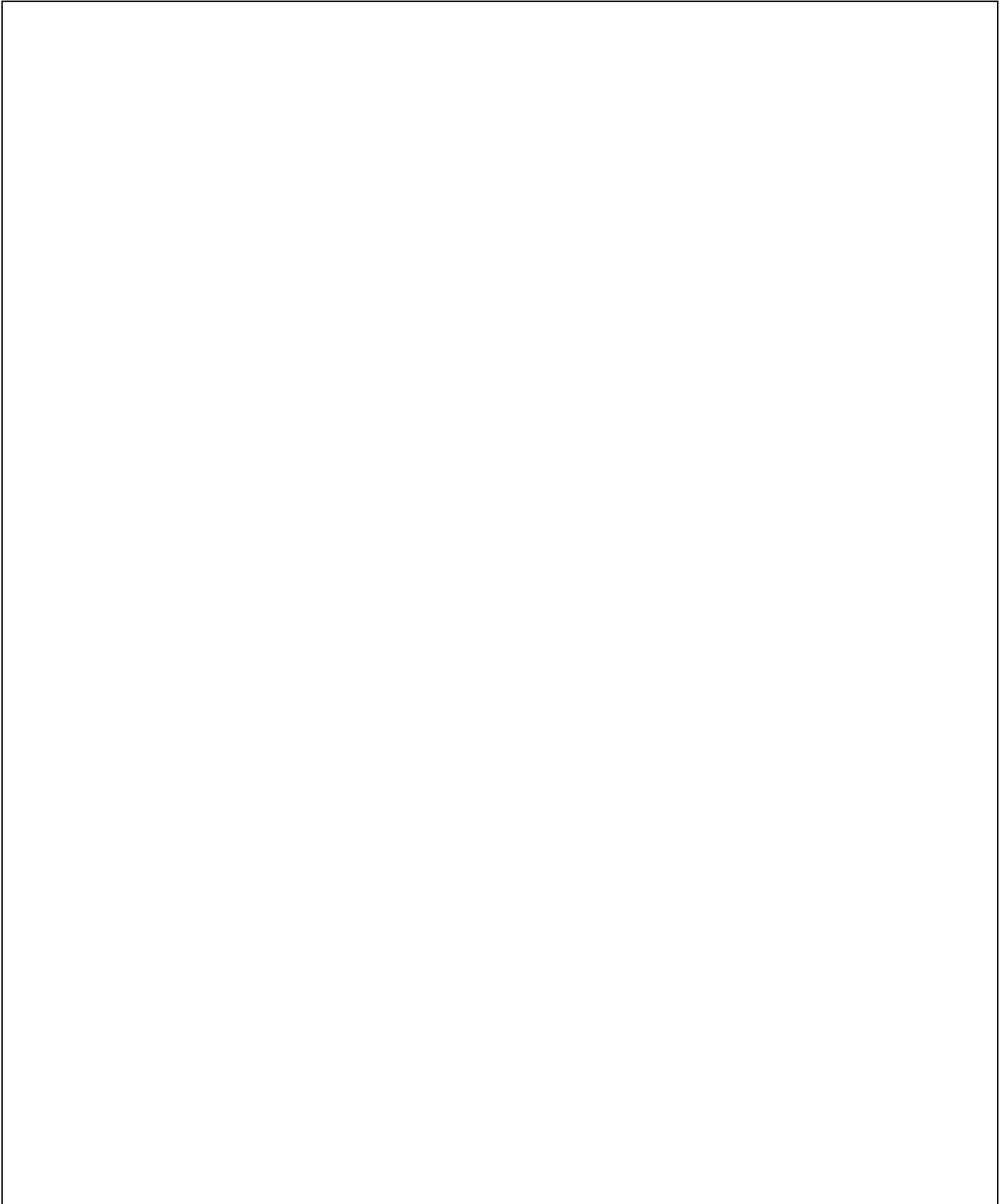
## CONCRETE BATCHER STANDARD FEATURES

Please familiarize yourself with the concrete batcher by reading the manual and looking over the following details before answering the questions.

- **Ingredients**
  - Eight (8) aggregates (single speed batching with auto-jog), Four (4) dual speed optional
  - Eight (8) cements (single speed batching with auto-jog), Four (4) dual speed optional
  - One (1) water-direct metering or pre-meter into reservoir via pulse meter input, weighed water option available
  - Six (6) admixtures (bottle or direct, line stay full or line blowout via pulse meter input)
- **Mix Designs**
  - 2,200 mix designs standard
  - Mixes designed as 1 cubic yard (or 1 cubic meter) basis
  - Batch in primary or secondary units
  - Up to 18 ingredients per mix design
- **Configuration Parameters**
  - Customizable names for ingredients and mix designs
  - Individual pre acts or coast values for all ingredients
  - Two (2) different jog modes: jog-on timer, jog-off timer
  - Individual over an 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 any mix design parameters
  - Add admixtures to 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 Free fall)**
- **Precision Control of Inching Gates for Aggregate and Cement Discharge**
- **Split Batching**
- **Auto Jogging**
- **Gross, Ideal Targets and Net Mode Batching**
- **Material Usage Accumulators**
- **Pass Code Protection**
- **U.S. or Metric Units as Primary**
- **Aggregate Moisture Compensation**

## 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 systems. Please include.)



# Questions:

## Input and Output Requirements:

Please mark all the inputs that apply to this system.

- |  |   |
|--|---|
| <input type="checkbox"/> admix 1 bottle empty            | <input type="checkbox"/> admix 1 pulse meter          |
| <input type="checkbox"/> admix 2 bottle empty            | <input type="checkbox"/> admix 2 pulse meter          |
| <input type="checkbox"/> admix 3 bottle empty            | <input type="checkbox"/> admix 3 pulse meter          |
| <input type="checkbox"/> admix 4 bottle empty            | <input type="checkbox"/> admix 4 pulse meter          |
| <input type="checkbox"/> admix 5 bottle empty            | <input type="checkbox"/> admix 5 pulse meter          |
| <input type="checkbox"/> admix 6 bottle empty            | <input type="checkbox"/> admix 6 pulse meter          |
| <input type="checkbox"/> water pulse meter               | <input type="checkbox"/> OK to discharge              |
| <input type="checkbox"/> aggregate discharge gate closed | <input type="checkbox"/> cement discharge gate closed |
| <input type="checkbox"/> aggregate conveyor is running   | <input type="checkbox"/> manual mode                  |

Does your concrete plant provide any other 120V or 240V inputs (sensor, switches, limit switches, photo eyes) not specifically mentioned in the following list? Please write them down here.

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Please mark all the outputs that apply to this system.

- |  |   |
|--|---|
| <input type="checkbox"/> cement 1 fast fill            | <input type="checkbox"/> cement 1 slow fill             |
| <input type="checkbox"/> cement 2 fast fill            | <input type="checkbox"/> cement 2 slow fill             |
| <input type="checkbox"/> cement 3 fast fill            | <input type="checkbox"/> cement 3 slow fill             |
| <input type="checkbox"/> aggregate 1 fast fill         | <input type="checkbox"/> aggregate 2 fast fill          |
| <input type="checkbox"/> aggregate 3 fast fill         | <input type="checkbox"/> aggregate 4 fast fill          |
| <input type="checkbox"/> water fill                    |   |
| <input type="checkbox"/> cement discharge gate open    | <input type="checkbox"/> cement discharge gate close    |
| <input type="checkbox"/> aggregate discharge gate open | <input type="checkbox"/> aggregate discharge gate close |
| <input type="checkbox"/> cement hopper vibrator        | <input type="checkbox"/> aggregate hopper vibrator      |
| <input type="checkbox"/> aggregate conveyor            | <input type="checkbox"/> lower dust schroud             |
| <input type="checkbox"/> water high discharge          | <input type="checkbox"/> water low discharge            |
| <input type="checkbox"/> mixer discharge               | <input type="checkbox"/> mixer run                      |
| <input type="checkbox"/> system alarm                  |   |
| <input type="checkbox"/> admix 1 fill                  | <input type="checkbox"/> admix 2 fill                   |
| <input type="checkbox"/> admix 3 fill                  | <input type="checkbox"/> admix 4 fill                   |
| <input type="checkbox"/> admix 5 fill                  | <input type="checkbox"/> admix 6 fill                   |
| <input type="checkbox"/> admix 1 discharge             | <input type="checkbox"/> admix 2 discharge              |
| <input type="checkbox"/> admix 3 discharge             | <input type="checkbox"/> admix 4 discharge              |
| <input type="checkbox"/> admix 5 discharge             | <input type="checkbox"/> admix 6 discharge              |

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.

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# Questions:

## 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 is required on the batch ticket? \_\_\_\_\_
6. Should the concrete batcher keep track of current inventory of material or only material usage? \_\_\_\_\_

## Weighing and Moving Aggregates and Cements:

1. Does the plant use the same weigh hopper to weigh aggregates and cements? (If yes, explain order of adds)  
\_\_\_\_\_  
\_\_\_\_\_
2. Does the plant weigh aggregates or cements by loss in weight (surge/holding hopper is on load cells)?  
\_\_\_\_\_
3. Does the plant use more than two (2) weigh hoppers (one (1) for aggregates and one (1) for cements)?  
\_\_\_\_\_
4. Does the aggregate require any equipment to move it from a surge bin into the weigh hopper other than a feed gate and gravity? \_\_\_\_\_
5. Does the aggregate require more equipment than a single conveyor and a discharge gate to move it into the truck or mixer? \_\_\_\_\_
6. Does the 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 the 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 require 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. Does this plant have a limit switch on the cement discharge gate? \_\_\_\_\_
11. Is the cement discharge gate on the 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? \_\_\_\_\_

# Questions:

## Water and Admixtures:

1. Is the water weighed instead of using a pulse meter? \_\_\_\_\_
2. Do you use more than one (1) water supply? If so, is the water metered through different water meters?  
\_\_\_\_\_
3. Does your process use more than two (2) water additions? Standard is one (1) 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 a water reservoir is used, does it have only one (1) discharge valve? \_\_\_\_\_  
If so, how is the wash down water added? \_\_\_\_\_
5. Is a single separate piece of equipment used 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 (Six (6) is the default maximum)? \_\_\_\_\_
7. Is a single separate piece of equipment to meter and discharge your admixture? 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. Is there more than one (1) 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 one (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 affect the duration of the mix time? Should the mixer ever be turned OFF with cement in it? \_\_\_\_\_
  6. When the concrete is discharged from the mixer, does the concrete batcher need to move it to a block press or skip hopper? Explain how this is accomplished. \_\_\_\_\_  
\_\_\_\_\_
  7. Do you need the concrete batcher 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 concrete batcher will be notified when 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 standard concrete batcher 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 concrete batcher capabilities here. Thank you for taking the time to answer these questions.

# Concrete Batcher Presale Checklist

The following checklist must be reviewed by the customer, scale distributor and Rice Lake representative prior to the entry of an order for a Rice Lake concrete batching system.

- **Plant Preparation**

- Plant construction complete
- Site preparation complete
- Plant wiring complete
- Moisture probes installed
- Water meter installed and calibrated
- Ad mix hardware installed and calibrated
- Materials on site
- Airlines, regulators and pneumatic controls in place and functioning
- Gates, valves, augers, conveyors and solenoids in place and functioning
- Plant and control room power to be configured "in-phase"
- Mix designs sent to Rice Lake upon receipt of order
- Admix representative to be on site during installation
- Customer or scale distributor to provide PC for on-site storage of database files

- **Scope of Technical Service**

- First 4 – 8 hours to be spent wiring
- Second 4 – 8 hours to be spent tuning plant
- Remainder of time spent on site devoted to training operators
- Scale distributor to be on site throughout Installation
- Scale calibration to be provided by scale distributor
- Electrician to be on site up to plant tuning and on call after
- On site modifications will delay installation and will be the responsibility of the customer
- Rice Lake staff will not perform welding, fabrication or millwork on site
- Rice Lake staff will not terminate electrical connections without a licensed electrician on site

# Concrete Batcher Presale Checklist

- **Customer Responsibilities**

- Have plant ready for installation of controls
- Send mix designs to Rice Lake at time of order
- Have materials on site prior to tuning plant
- Provide any necessary welding, fabrication or millwork services on site
- Provide licensed electrician
- Pay for all travel expenses and field service fees
- Customer provided peripherals will be sent to Rice Lake prior to shipment of controller
- Ensure plant personnel are present during the training process (operators and their backup)

- **Rice Lake Salesperson Responsibilities**

- Review quote with customer and distributor
- Forward plant documentation and wiring plan to scale distributor
- Review concrete batcher wiring diagram with customer and scale distributor
- Review concrete batcher checklist with customer and scale distributor
- Review scope of field service with customer and scale distributor
- Review customer responsibilities with customer and scale distributor

Customer Name: \_\_\_\_\_

Authorized Agent: \_\_\_\_\_

Date: \_\_\_\_\_

Distributor Name: \_\_\_\_\_

Authorized Agent: \_\_\_\_\_

Date: \_\_\_\_\_

Rice Lake Representative: \_\_\_\_\_

Date: \_\_\_\_\_