

## Modular Water Treatment Plant [Inventory ID #1154169]



### Modular Water Treatment Plant

- Make: BCA (Corix)
- Model: ST-1100-3
- Throughput: 1.2 Million Gallons Per Day
- Triple Train
- For Mining Process Water, Agriculture or Water Treatment Use
- Condition: New Surplus, Never Put Into Operation
  
- Flow Rates:
  - Nominal: 367 GPM Per Train (23.1 L/s)
  - Total Flow (3 Trains) = 1,100 GPM Total (69.3 L/s)
  
- Hydraulic Loading
  - Clarifier: 1.61 GPM/Ft<sup>2</sup>
  - Filter: 3.95 GPM/Ft<sup>2</sup>
  
- Detention Time:
  - Flocculator: 14 Minutes
  - Clarifier: 31 Minutes
  - Filter: 8 Minutes
  - Total: 53 Minutes

Plant Description: The BCA Model ST-1100-3 Water Treatment Plant is designed to treat raw water for the removal of color, turbidity and other impurities and to provide a high-quality effluent for potable and domestic use. The plant combines the time proven principles of mixing, coagulation, flocculation, tube settler assisted clarification and high-rate filtration. The treatment process is a completely automatic, gravity flow operation. It consists of three process trains each rated to treat 367 gallons per minute and comprising the following components:

- Raw Water Flow Control.
- Chemical Coagulation and Rapid Mixing for:
  - Liquid Alum as Primary Coagulant
  - Soda Ash for pH Adjustment
  - Polymer Coagulant Aid.
- Mechanical Flocculation (14 minutes Detention with Tapered Flocculation)
- Clarification Within a Tube Settler 31 Minutes Detention, 1.61GPM/Ft<sup>2</sup> Average Rise Rate at Maximum Flow.
- Filtration Through Dual Media Filter With Maximum Loading of 3.95 GPM/Ft<sup>2</sup> Post Treatment Soda Ash and Sodium Hypochlorite Injection
  
- Components
  - Control Valves
    - Bray 31/108 Butterfly Valve c/w Bray 70 Modulating Electric Actuator (Inlet, Rinse and Effluent)
    - Bray 31/108 Butterfly Valve c/w Bray 70 On/Off Electric Actuator (De-sludge, Air Scour)
    - Bray 31/108 Lug Style Butterfly Valve c/w Lever Operator (Inlet Isolation, Outlet Isolation)
    - Cla-Val #43G-OID Rate of Flow and Solenoid Shut off Valve (Filter Backwash)
  - Hayward Rapid Mixer
  - Wika #S- 10 Loss of Head Transmitter and Indicator Assembly (Filter)
  - Baldor SCR Flocculator Drive Motor
  - DC Motor Speed Control
  - Hub City Worm Gear Reducer
  - MRI Tube Settling Modules
  - Non-Clog Orthos Nozzles
  - Goulds Effluent Pump
  - Goulds Backwash Pump
  - Apco Double Door Check Valve (Air Scour)
  - ABB Mag-Flowmeter
  - Hach 1720E Turbidimeter
  - Miltronics "The Probe"
  - Chemical Feed System:
    - LMI Metering Pump (Coagulant, Soda Ash, Polymer & Hypochlorite)
    - J&L Poly Tanks (Coagulant, Soda Ash, Polymer & Hypochlorite)
    - Wingert Mixer, 1750 RPM, 1/4 HP (Soda Ash)
    - Wingert Mixer, 350 RPM, 1/3 HP (Polymer)
  
- Packaged Plant Control Panel
  - Plant Shall Be Supplied With A NEMA 12 Control Panel c/w Allen Bradley SLC 5/03 PLC
  - Control Panel Shall Allow Automatic Operation of All Packaged Plant Systems;

- Control Valves, Chemical Pumps, Rapid Mixer, Flocculators, Backwash  
Operation; Etc.
- All Equipment Shall Have Individual HOA Selector Switches and Indicator Lights

- Location: Southern USA

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