

## Model: CoAg2-20A

### GENERAL

This industrial grade water treatment product employs both **chemical coagulation and chemical flocculation technology**, which is capable of removing suspended solids, emulsified oils, and heavy metals.

The **patent pending** model **CoAg2-20A** is one of the Innovator Series modules offered by Water Maze that can be applied as a stand alone solution, or it can be integrated with other components as part of a larger solution. For most applications, this product should be purchased with the Water Maze model **IPF2-20D Indexing Paper Filter**, which will dewater the coagulated and flocculated solids. In addition, the Water Maze model **REC2-20A Recycle** module with a clean water storage tank (sized to fit the application) can be selected to convert this product into a recycle/reclaim system.

- All of the equipment shall be furnished by one supplier as a pre-assembled standard product. The supplier shall be ISO-9000 and ISO-14001 certified. The equipment shall be manufactured by Water Maze, located at 4275 NW Pacific Rim Blvd., Camas, WA. 98607.
- The product(s) must be ETL Certified (with labeling showing that the product, rather than components, is indeed certified), and must conform to UL Standard 73 & CAN/CSA 22.2.

### INDUSTRIAL WATER TREATMENT/RECLAIM SYSTEM

This section of the specification covers the performance, process, and specifications for the CoAg2-20A Chemical coagulation and Flocculation system.

### PERFORMANCE

As with any water treatment technology, the effluent water quality will be subject to the influent water quality, the proper operation, and proper maintenance of the system. In addition, in order to provide a reasonable conclusion as to the feasibility of applying this product to a specific application, a bench-scale test should be performed by a Water Maze certified sales engineer on a representative water sample that will be processed by this product. With the aforementioned in mind, this product is capable of treating industrial waste water generated from a broad range of waste streams that contains suspended solids, emulsified oils & greases, and heavy metals. This product will process water that may be suitable for recycling through a pressure washer, or that may be discharged to a public sewer system.

The wash water treatment system will:

1. Utilize chemical-coagulation and chemical flocculation, agglomerate emulsified oils, suspended solids, and heavy metals.
2. Be capable of processing up to 20 (Twenty) gpm of waste water.
3. Automatically maintain proper water pH chemistry to provide effective electro coagulation and flocculation action, when the optional pH Controller is included.
4. Require an Indexing Paper Filter, model IPF2-20D, (or similar device) to dewater the agglomerated material generated by the CoAg2-20A system.
5. Require a recycle module; model REC2-20 for applications that require water management for recycling.

### THE PROCESS DESCRIPTION

The CoAg2-20A Chemical coagulation and chemical flocculation system includes the following unique features:

- The system shall automatically process water through two cone-bottom processing tanks on an alternating batch feed, continuous flow basis.
- The processing tanks will automatically purge the treated water as controlled by the PLC smart controller
- When the system is not processing water, the processing tanks will be emptied within 15 minutes after the in feed pump is turned off, thus no untreated water will remain within the system.

### GENERAL DESCRIPTION

The model CoAg2-20A system shall be a compact module requiring a suitable base pad and minimal onsite assembly. The system will include the following components, options, and features.

- Skidmounted on a powder coated steel platform with a fully enclosed cabinet and lockable front doors to house the main electrical controls;

- The unit shall not exceed the following dimensions:  
LWH 78" x 58" x 81"
- ¾ hp infeed pump with semi-open impeller with float level control that includes a basket strainer to retain and prevent large debris from being pumped down stream;
- In-line flow switch to shut-down the in feed pump in case water is not flowing downstream.
- An optional, integrated, pH control kit,
- Two adjustable, peristaltic pumps with inline injectors; and in-line mixing chambers;
- Two 5-gallon containers with liquid level sensors that are electronically monitored by the onboard PLC;
- (2) Two 150-gal. Polyethylene cone-bottom mixing tanks with air-actuated directional control and auto-purge valves for each tank.
- Fully automated control panel with NEMA 4X enclosure.
- PLC controls and function displays for easy operation and system control.
- The onboard PLC system must provide monitoring and control over all electrical components and provide automatic shut down of the system under the following conditions:
  - o If the sump pump control float senses low influent waste water, or if the in-line flow switch senses water is not flowing through the mix tubes.
  - o If the liquid level in either of the above noted 5-gallon containers is too low,
  - o If the both cone-bottom tanks are full,
  - o If the paper roll installed on an externally installed Indexing Paper Filter is critically low and is about to run out of paper.
  - o If the liquid level is too high in the sump tank or pit installed below the above noted Indexing Paper Fabric Filter.

### MAINTENANCE CONTRACT

The supplier of the equipment listed above shall be local and shall have completed training and certification as provided by the manufacturer, which makes the supplier uniquely qualified. Preference will be shown to the uniquely qualified supplier that can provide local support that includes a monthly preventative maintenance contract, covering all the equipment and a price list for any consumable items.

### QUALITY CONTROL

All equipment in this section will be pre-tested at the factory prior to shipment. The manufacturer shall provide a written warranty that the products provided will be free from defects in material or workmanship for a period of 12 months from date of purchase, when used in accordance with written instructions and guidelines provided by the manufacturer. See warranty for exact details.

### CORROSION PROTECTION

The model CoAg2-20A shall be painted with an epoxy wrinkle black powder coating and baked on at 400 F. An optional lower skid made of stainless steel must be available.

### OPERATION AND MAINTENANCE MANUAL

One copy of the Operating and Maintenance Manual will be furnished with the equipment. The manual will contain all pertinent information on the equipment and parts in the equipment.

### EXECUTION

The complete system shall be installed in accordance with manufacturer's instructions and recommended cleaning chemicals for proper operation.