

UNIVERSAL CLARIFIER

Versatile water treatment tailored to fit your water quality requirements.

CUSTOMIZABLE

ONE TREATMENT MODULE CAN BE APPLIED TO VARIOUS WATER TREATMENT APPLICATIONS



TREAT & DISCHARGE TO PUBLICLY OWNED TREATMENT WORKS (POTW)



PRETREATMENT FOR RECYCLE APPLICATIONS



PRETREATMENT PRIOR TO WATER EVAPORATION

SELECT FROM A MENU OF WATER TREATMENT TECHNOLOGIES TAILORED TO MATCH YOUR APPLICATION REQUIREMENTS

TECHNOLOGIES INTEGRATED INTO ONE MODULE TO ACHIEVE THE BEST WATER QUALITY, AT THE MOST ECONOMICAL PRICE



APPLICATION / PRODUCTS SELECTION GUIDE

STEP 1 What constituents in the water need to be removed?

STEP 2 What water quality requirements need to be achieved?

CHARACTERISTICS OF THE CONSTITUENTS

- The pH of the water is too high / too low (6.5 TO 8.5)
- Free-floating oils exist (after pH adjustment).
- Emulsified oils in the water (after pH adjustment)
- Suspended solids that will not settle out
- Heavy metals need to be removed from the water
- Dissolved organic matter is causing malodorous conditions

STEP 3 What are the characteristics of the constituents that need to be removed?

STEP 4 Select the clarifier size and appropriated water treatment technologies to fit

SELECTION OF TECHNOLOGIES

- pH control system (see step 7D)
- Oil-skimmer (see Step 3)
- Chemical coagulation / flocculation (see step 7E) Internal piping manifold (see step 2)
- Chemical coagulation / flocculation (see step 7E) Internal piping manifold (see step 2)
- MetalR+ chemical injection (see step 7E & 7F)
- Ozone system (see step 7C) Bio-Digester with PM-1000D (see step 5)

OIL/WATER SEPARATION

OILS: FREE-FLOATING, EMULSIFIED, AND SOLUBLE

Oil/water separators are generally capable to separating free-floating oils from the surface of water, but have little effect on removing emulsified oils or soluble oils.



Are the oils free-floating?

Traditional oil skimmers are applied to applications where the oils are buoyant and are floating on the surface of the water. Apply Water Maze oil skimming technologies.



Are the oils chemically emulsified and dispersed within the water?

To "de-emulsify" the oils, apply Water Maze chemical coagulation / flocculation technology



Are the oils water soluble ?

Soluble oils are very difficult to remove from water. In lieu of 100% off-site disposal, apply Water Maze water evaporation technology to reduce the water volume prior by as much as 95%.

COAGULATION / FLOCCULATION

REMOVE SUSPENDED SOLIDS, EMULSIFIED OILS, AND HEAVY METALS

Coagulation/flocculation water treatment technology is used to remove suspended particles and/or emulsified oils. Particles are suspended due to natural ionic charges that are present in the water. For emulsified oils, the use of cleaning agents create similar ionic charges around oil droplets. In either case, these common charges create repelling forces to suspend matter.

COAGULATION | Neutralizes the repelling charges and allows the matter to gather (agglomerate). For most

applications, coagulation can be accomplished by mixing a chemical coagulant into the water.

FLOCCULATION | Creates an additional adhesion between the agglomerated matter by mixing a flocculent chemical into the water. Creating larger agglomerations and adds molecular weight to the matter, which enhances the separation and removal process of the contaminants from the water.



ADVANTAGES: Chemical coagulation and flocculation can produce exceptional water quality with minimal maintenance and can successfully treat broad ranges of waste streams.

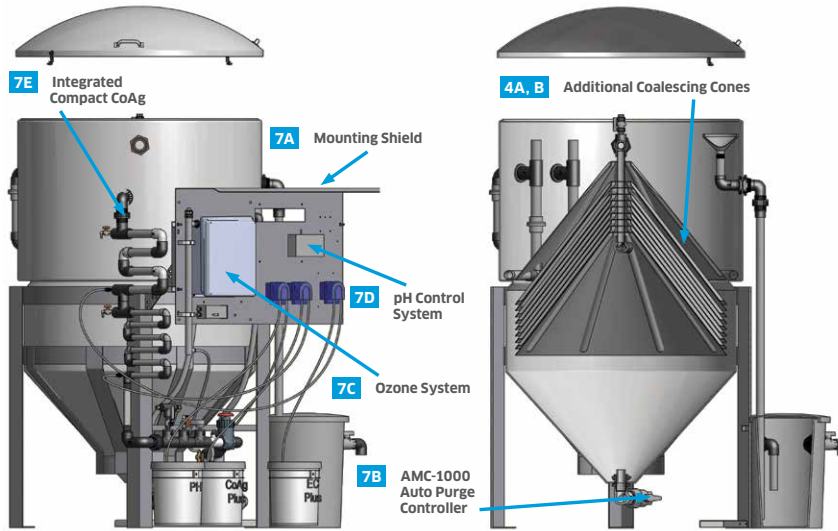
PRIMARY TREATMENT / UNIVERSAL CLARIFIER CONFIGURATION CHECK LIST

Non-standard items

Description	Item #	Specifications
STEP 1 Select Tank Size - Select one	CLT-300	CLT-600
CLT-300 - 300-gallon Cone-bottom tank , cradle, and lid, processing rates @ up to 10 GPM	1-300	N/A
CLT-600 - 600 gallon Cone-bottom tank , cradle, and lid	N/A	1-600
STEP 2 Select Internal Settling Manifold - For solids settling, as well as settling of flocculated matter		
CLT-300 - / CLT-600 internal tank-in-tank design	2-300	2-600
STEP 3 Select Oil Skimmer - if applicable (For removal of free-floating oils)		
CLT-300 - with Belt-Mop skimmer w/ oil decanter	3A-300	3A-600
CLT-300 - with Funnel skimmer, 2 cones, oil decanter	3B-300	3B-600
STEP 4 Select Oil Coalescing / Separator Cones (For additional oil coalescing)		
CLT-300 - Additional 4 cones (ref above 3B-300)	4A-300	N/A
CLT-600 - Additional 8 cones (ref above 3B-600)	N/A	4B-600
STEP 5 Select Bio-digester		
Bio-digester package (CLT-600 only)	N/A	5-600
STEP 6 Select Oil Coalecing / Separator Cones		
Rotating self-cleaning screen mounted vertically inside a CLT tank	6-300	6-600
STEP 7 Select Factory Install Options		
Mounting shield - for installing electrical control panels	7A-300	7A-600
AMC-1000D Auto-purge system installed. <i>Compressed air required</i>	7B-300	7B-600
UV Ozone system with circulation pump and timer	7C-300	7C-600
pH Controllor system	7D-300	7D-600
Integrated Chemical Coagulation /Flocculation system	7E-300	7E-600
MetalR+ Chemical injection added to above CoAg sys	7F-300	7F-600
Auto-water Discharge / Circulation valve (not recommended with CoAg)	7G-300	7G-600
Sludge Tray / dewatering tray with lid, stainless-steel riser, 5 bags	PN: 8.906-478.0	

Universal Clarifier System Concept Drawings

1 Universal Clarifier System with Coalescing Cones and Funnel Skimmer

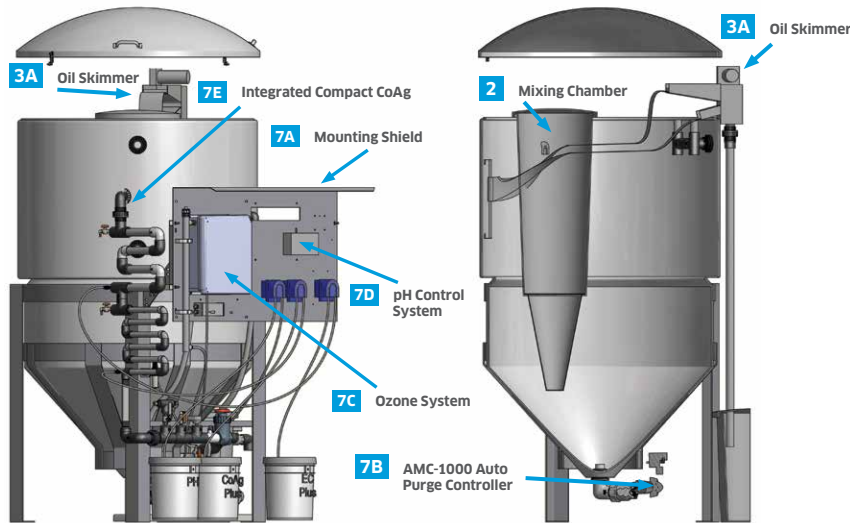


A Mounting Shield A simple way to mount external options, this bracket and shield is required when selecting any combination of options B-F.

B AMC-1000D Auto Purge Controller Control the AMC 1000D Auto Purge Valve. (highly recommended). INCLUDES: Controller Housed in a NEMA Panel, Timers, and Air-actuated Purge Valve. *Utility Requirements: Compressed air (4 cfm @ 85 PSI activated), and 120 volt @ 3 amps*

C Ozone Systems (for the purpose of odor control): consists of an ozone generator, circulation pump, manifold with mazzei injector, and control panel with timer. *Utility Requirements: 120 volt @ 9 amps*

2 Universal Clarifier System with Belttop Skimmer Integrated CoAg and Mixing Chamber

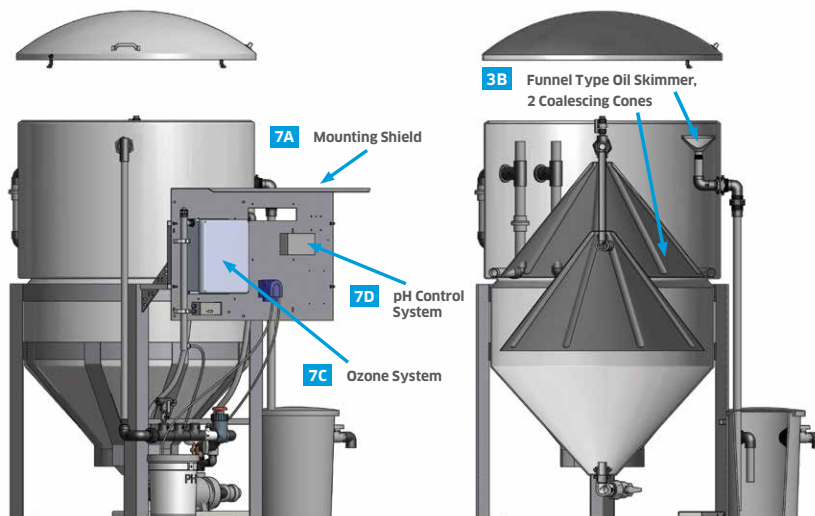


D pH Control System Controls pH of the water with a peristaltic pump. Includes: Controller with Inline Manifold, pH Probe and Injector, Peristaltic Chemical Feed Pump with Flow Switch. *Utility Requirements: 120 volt @ 3 amp.*

E Integrated Compact CoAg Integrates the same chemical coagulation / flocculation technology as stand-alone Compact Technology INCLUDES: Enhanced External Mixing Manifold, Chemical Feed Pumps, and Control Panel Housed in a NEMA Box

F MetalR+ Chemical Injection System* Utilized when applying MetalR+ chemical for removal of metals. (included with Integrated Compact CoAg) INCLUDES: Chemical Feed Pump; Injector, and Feed Port in the above Piping Manifold.

3 Universal Clarifier System with Coalescing Cones with Funnel Skimmer



G Auto Water Discharge / Circulation Valve System* Allow water to flow (24/7) back to the pit system reducing stagnant water issues. *Utility Requirements: 120 volt @ 1 amp.*

H Sludge Tray* Dewatering sludge tray with lid; stainless steel riser; and 5 sludge bags (supplied as a loose item)

*Not shown in drawing.

COMPLETE WASH WATER SOLUTIONS.

Since the late 1980s, Water Maze has been perfecting the art and science of wash water treatment. We have incorporated various technologies that are capable of: settling heavy solids, removing suspended solids; skimming free-floating oils; removing emulsified oils; bio-remediating organic matter; and reducing (evaporating) water. We provide systems for discharge to a city sewer, as well as for recycling water for a limited time period.



Manufacturing Excellence

Water Maze products are built and tested in America. Our manufacturing center is ISO 9001 and 14001 certified. Every product is tested before shipping to ensure high quality and reliability.



Engineering & Technical

Our team of design engineers and service technicians have decades of experience in industrial water processes. We have designed and installed thousands of systems that are treating and recycling millions of gallons of water daily.



Expertise & Support

With experienced local dealer support, we can guide your team through the installation process, provide start-up services, and train your technicians to have your system operating efficiently starting on day one.

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