waterMaze
WATER TREATMENT SYSTEMS

WB

Super Energy-Efficient Wastewater Evaporator with Patented Design Using Submerged Combustion Technology

Evaporates up to 120 Gallons per Hour

Fueled by Natural Gas or Liquid Propane

100% Heat Exchanger Efficiency

ETL Safety Certified to UL-795

■ *The **Access Port** offers easy access for servicing the inside of the tank, plus it has a tempered glass view port for monitoring the system while in operation.*

■ *High-velocity, **Nozzle-Mix Jet Burner**, fired by natural gas or propane, shoots flame down into sparger tube generating temperatures as high as 2000°F for highly effective reduction of VOCs.*

■ *RF Capacitance Multipoint **Liquid Level Assembly** automatically monitors and adjusts for fluctuating liquid levels, ultimately shutting down the system when wastewater has been evaporated; tempered glass tube with RF Capacitance switch is easily accessed for servicing and cleaning.*

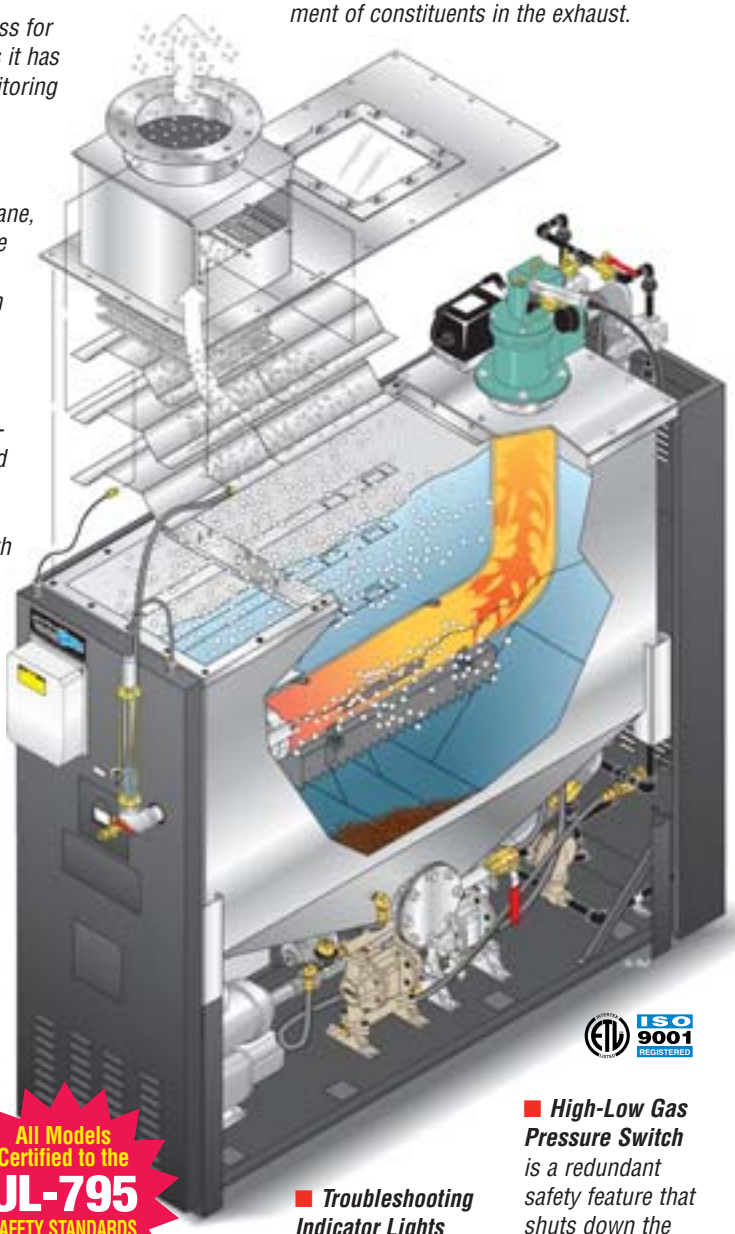
■ *Direct surface injection from the **Foam Suppression System**, delivered by compressed air, eliminates the effects of foaming; stack pressure monitoring switch shuts down the entire unit in case of heavy entrainment.*

■ *Industrial regenerative **Air Pump** supplies air for the burner system.*

■ *Heat-resistant, heavy-duty stainless steel **Sparger Tube** features unique air distribution system for uniform release of heated gasses directly into the water.*

■ ***Low Air Pressure Switch** is yet another redundant safety feature that shuts down the WB should the air pressure ever fluctuate.*

■ *Stainless Steel **Steam Demister** screens are effective in removing water droplets in the steam to reduce entrainment of constituents in the exhaust.*



All Models Certified to the UL-795 SAFETY STANDARDS OSHA Compliant

■ ***Troubleshooting Indicator Lights** make locating system failure quick and easy.*

■ ***High-Low Gas Pressure Switch** is a redundant safety feature that shuts down the WB should the gas pressure fluctuate.*

■ *Three stainless steel **Micro-Bubble Shrouds** split large steam bubbles into millions of micro-bubbles, dramatically increasing the surface area for transmitting heat and enhancing evaporation effectiveness.*

■ *Nema 4 rated plastic **Electrical Control Box** protects electrical components from water and vapor damage.*

■ *Auto-fill and auto-purge **Air Diaphragm Pumps** are resistant to fluctuations in pH; solenoid valve automatically controls flows.*

■ *Wastewater concentration level is monitored by an **Hour Counter**; once the projected concentration level has been achieved, the auto-purge feature is activated.*

■ *UL-certified, solid-state **Veri-Flame Monitor** regulates start-up sequence of gas-fired burner providing flame sensor protection before, during and after an operating cycle.*

■ *Soft-start and fast-closing **Electro-Hydraulic Gas Valve** opens and closes the main gas valve at the precise moment for smooth operation.*

■ *Top quality **Ignition System** features electric fired burner for reliable ignition and a low-flame burner for smooth transition between start up and full flame.*

■ ***Auto Purge** quickly removes and easily disposes of sludge or concentrate from the evaporator tank.*

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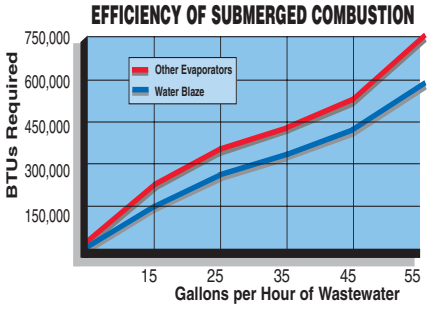
There are two WB models, including the WB-120A at right for handling waste streams of up to 120 GPH

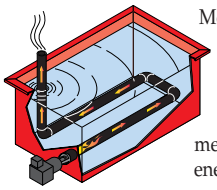
WHAT MAKES THE WB UNIQUE

The WB series has two patents and is the first evaporator of its size to use the extra-high efficient submerged combustion technology. There are two models capable of handling waste streams at a rate of up to 60 and 120 gallons per hour (GPH).

Featuring top-of-the-line immersion tube jet burner components, with a solid-state flame control monitor, the WB is capable of creating temperatures up to 2000°F, releasing hot flue gases directly into the water.

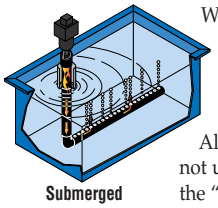


Why submerged combustion is superior to conventional evaporation



Immersion Heating

Most evaporators use Immersion Heating, in which a heat exchanger is immersed in a tank of wastewater. While this method is effective, it is not energy efficient. In fact, as much as 30% of the heat escapes out the vent stack.



Submerged Combustion

With submerged combustion hot gasses are forced through an immersed tube and released directly into the water for maximum heat exchanger efficiency. All of the heat goes into the water—not up a vent stack nor impeded by the "insulation" of residual solids baked onto the tube or floor.

WB Specifications

MODEL	WB-120A	WB-50A
Evaporation Rate*	1-120 GPH	1-60 GPH
Fuel Usage	1,142,000 BTU	571,000 BTU
Fuel Supply	Natural or LP Gas, 1.5" NPT	Natural or LP Gas, 1" NPT
Compressed Air	4 CFM @ 80-100 psi	4 CFM @ 80-100 psi
Vent Stack	12"	10"
Tank Capacity	170 gal.	76 gal.
Tank Material**	316L SS (12 gauge)	316L SS (12 gauge)
Electrical	220V 1ph 30A	220V 1ph 20A
Dimensions (L x W x H)	79" x 50" x 81"	73" x 31" x 80"
Ship Weight	1930 lbs.	1195 lbs.

* Evaporation rates are calculated using water only. Your evaporation rate may vary depending on elevation and contaminants in your waste stream.
** Standard allow 316L. Optional corrosion-resistant AL-6XN stainless steel alloy for resistance to higher chloride concentrations.

How evaporation can save hauling fees

It can cost up to **$1.00 or more per gallon** to have wastewater hauled off. That fee is incurred even though most industrial wastewaters consist of 95% water and only 5% contaminant. A wastewater evaporator reduces the 95% water content for as little as **$.03 to $.08 per gallon**. That means you only have to haul off the 5%—minimizing both your cost and liability.

NOTE: We are constantly improving and updating our products. Consequently, pictures, features and specifications in this brochure may differ slightly from current models. This equipment is intended for indoor use only. Customer is responsible for any permits, compliance with codes, or other government requirements associated with the installation, use, or disposal of waste associated with this equipment. This product is protected under U.S. Patent Nos. 5,381,742 and D357,056; Canadian Patent No. 75,858.

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OPTIONS INCLUDE: Stainless steel tank upgrades from 316L, wastewater flame injection system, conversion kits and accessories, factory conversion kit, foam detection system, flue pipe rain shield

See your Water Maze Dealer for part numbers and pricing.

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WATER TREATMENT SYSTEMS

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