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Wastewater Treatment & Recovery Technologies

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Max-Evap Features:

- Polypropylene, PVC, or Titanium construction
- Non-plugging high surface area packing
- Titanium packing material retainers are standard on all Max-Evap systems
- Sealed and gasketed access doors for improved serviceability
- Vertical & horizontal sprays to increase evaporation & eliminate downtime & cleaning
- Horizontal air discharge to prevent condensate from draining back into the evaporator
- Total accessibility
- Maximum attainable evaporation rates up to 75 gallons/hour at 150°F/unit

Advantages of Max-Evap

- Random evaporative surface
- Vertical mist eliminator
- Horizontal discharge
- Accessibility
- Separate blower compartment
- Packing wash-down assembly

Low Initial Cost - Easy to Install - Low Operating Costs
DON'T TREAT - RECOVER!

Atmospheric Evaporator Systems Max-Evap

Max-Evap Systems have proven to be a very cost effective method of atmospherically evaporating water from chemical process solutions for chemical recovery, and evaporation of water from liquid waste to reduce hazardous waste disposal costs.

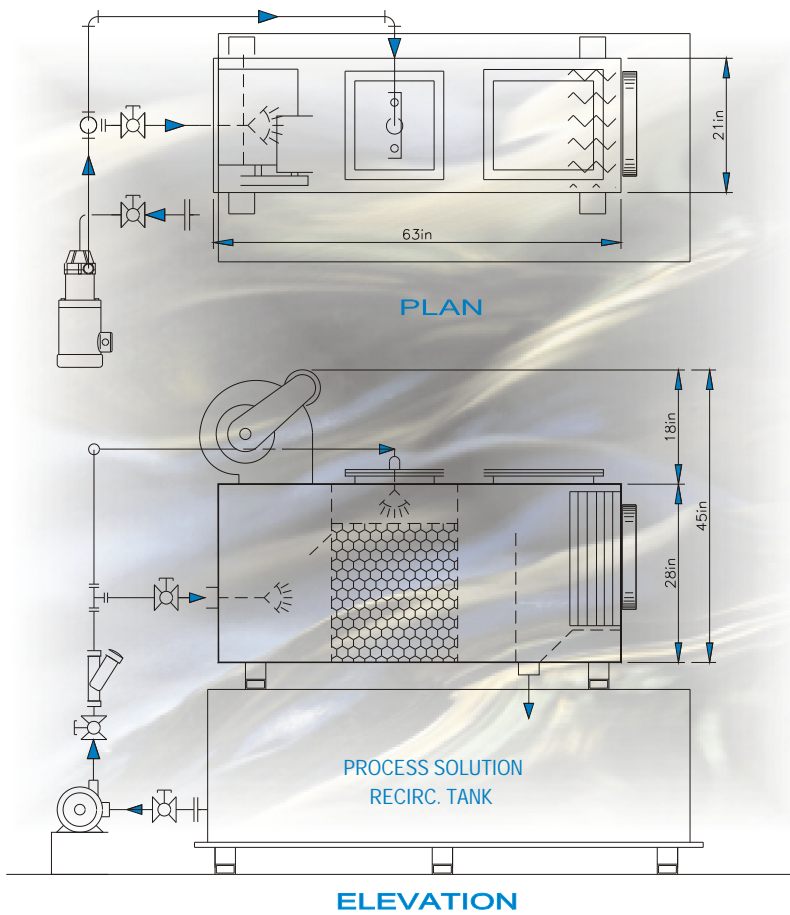
With the Max-Evap atmospheric evaporation system, process solution is pumped from the process tank to the Max-Evap unit, sprayed over a randomly oriented, high effective surface area packing material and returned by gravity to the tank. At the same time, air is blown through the wetted high surface area packing material. Evaporation of the process solution is, as a result, enhanced considerably. The headroom thus created in the process tank is made up from the downstream rinses, thereby returning dragged-out chemicals to the process tank.

Any processing solution in an open tank will lose water through natural evaporation. The rate depends on a number of factors, including:

- Temperature of processing solution
- Temperature of surrounding air
- Surface area of solution exposed to air
- Movement of air across solution surface
- Atmospheric humidity

Max-Evap atmospheric evaporators evaporates water from the chemical processing bath providing the volume reduction required to return the drag-out rinses to the processing tank, thus recovering the rinse water and the process chemistry. Max-Evap evaporators simply increase the rate of natural evaporation by increasing the surface area of the solution to be evaporated and forcing a large volume of air over the expanded surface area. The result is a moisture rich air stream leaving the evaporator and a concentrated liquid stream returned to the plating tank. Only water is evaporated from the process solution so the chemical composition of the bath is not changed in any way whatsoever





STANDARD EVAPORATOR LAYOUT

MODEL	CONSTRUCTION MATERIALS	PACKING MATERIAL*	DIMENSIONS L x W x H	MAX. TEMPERATURE °F
KME-1	POLYPROPYLENE	PP	63" x 21" x 35"	160
KME-2	PVC	PP	63" x 21" x 35"	140
KME-3	POLYETHYLENE	PE	63" x 21" x 35"	140
KME-SS	STAINLESS STEEL	PVDF	63" x 21" x 35"	200
KME-K	PVDF	PVDF	63" x 21" x 35"	200
KME-F	FIBERGLASS COATED PVC	PP	63" x 21" x 35"	180
KME-T	TITANIUM	PVDF	63" x 21" x 35"	200
SKME-1	POLYPROPYLENE	PP	77" x 25" x 40"	160
SKME-2	PVC	PP	77" x 25" x 40"	140
SKME-3	POLYETHYLENE	PE	77" x 25" x 40"	140
SKME-SS	STAINLESS STEEL	PVDF	77" x 25" x 40"	200
SKME-K	PVDF	PVDF	77" x 25" x 40"	200
SKME-F	FIBERGLASS COATED PVC	PP	77" x 25" x 40"	180
SKME-T	TITANIUM	PVDF	77" x 25" x 40"	200

* packing material is subject to change dependent on type/temperatures of solution processed.

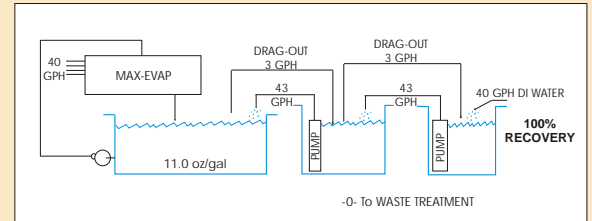
Energy requirements for a regular Max-Evap™

SOLUTION Temperature	EVAPORATION gal/hr	BTU/hr Required	KW Required	BOILER hp Required
150 F (65°C)	50	450,000	132	14
140 F (60°C)	40	360,000	103	11
130 F (54°C)	30	270,000	79	8
120 F (49°C)	20	180,000	53	5
110 F (43°C)	12	108,000	32	3
100 F (38°C)	8	72,000	21	2
90 F (32°C)	5	45,000	13	1.5

- Recovery of plating solutions
- Reduce solution growth in plating baths
- Reduction of liquid hazardous waste
- DI regeneration waste evaporation
- Recovery of precious metal containing water
- Cooling of chemical process solutions

OPTIONAL Equipment

- Chromic acid compatible pumps
- Kimre pad scrubbers
- KMET- Evaporation tanks & Heating systems.
- PLC controlled turnkey closed loop evaporation systems.
- Maxi-Spray counter flowing spray rinsing systems.



Technical Specifications

Floorspace:

Standard Max-Evap:

21" x 63" x 52" high including blower

Super Max-Evap:

25" x 77" x 57" high including blower

Electrical: Single or three phase

Blowers Std. : ¾ hp Super: 1-½ hp

Pumps ¾ hp

Heaters 230/460/3/60 with amperage depending upon evaporative rate

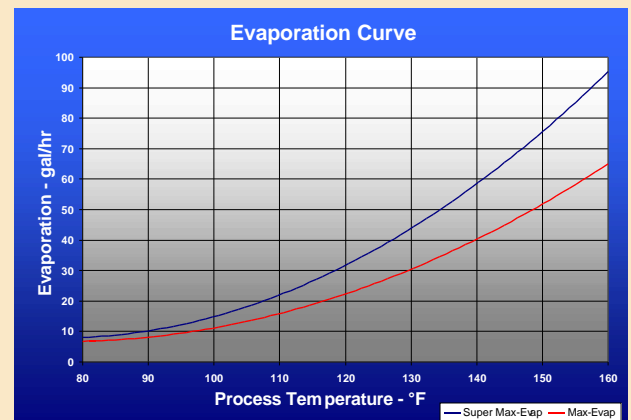
Steam:

Low pressure 15 p.s.i.

Operating Weight:

325 pounds (150 kg) for a regular Max-Evap™

355 pounds (160 kg) for a Super Max-Evap™



* Average field test data.