

## FAQ'S For Cooling Towers

**Q. Where does the MetalOx Unit get installed?**

A. Typically, in the main re-circulating line in a sidestream configuration preceded by a sediment/particulate filter.

**Q. What additional hardware is necessary for installation?**

A. Typical installations just require standard plumbing fittings.

**Q. How do you size a MetalOx Filter?**

A. Size is based on a percentage of the put-through flow rate.

**Q. At what point will the scale be removed?**

A. Scale will begin to loosen and turn into a "soft scale" within 24 hours. Over the next 30-45 days scale will slough off and come through in the water stream, hence the need for a sediment filter.

**Q. Are there tests to be taken and, if so, how often?**

A. To determine if the filter is still working properly tests could be taken for zinc, copper and pH. After the installation test for these substances often during the first two weeks to establish a "baseline" and once a month thereafter.

**Q. How will we know when the disks need to be replaced?**

A. You will notice a significant drop in the zinc and copper levels along with a drop in the pH. If the levels continue to drop, replacement time is near.

**Q. How often do the media packs need to be replaced?**

A. On average, once a year. Replacement time will vary.

**Q. Can we stop using chemicals?**

A. Yes. No scale or biological control chemicals are needed.

**Q. What changes can we expect to see?**

A. Typically, pH will increase. Copper and zinc levels will also increase. Water can run at higher TDS before blowdown is necessary. Units will run at greater efficiency.

**Q. Is it a problem if we don't use the equipment all year?**

A. No, just make sure not to drain the water from the filter. Once exposed to water, if it then becomes exposed to air, the material will deteriorate more rapidly than normal.

**Q. Are algae and bacteria a problem if we shut the system?**

A. If there is no water in the equipment algae and bacteria will not grow. The filtration material inside the filter is bacteriostatic, so no bacteria or algae can grow inside the filter.

**Q. If the filter is installed outside should it be protected ?**

A. As water will be flowing through it, it cannot be allowed to freeze.

**Q. How do we know the systems are running efficiently?**

A. You can test for the difference in thermal efficiency between the incoming and outgoing water. But a visual inspection after 30 days and every 30 days thereafter is best.

**Q. How do your systems compare with chemical treatment?**

A. In general our systems are less expensive, require no EPA regulations, are not considered hazardous waste and are recyclable.

**Q. How are your systems less than chemicals?**

A. The main savings are: the reduction of fuel which means your systems will operate at greater efficiency, less blowdown which means your cost for utilities will be

greatly reduced, minimal or no downtime which means reduction in labor costs and elimination of acid wash, no hazardous materials to deal with which means reduction in accidents and lowering of workman's comp costs as well as less injuries and missed time, and many other day to day operational factors. When all things are considered and the total operational costs are taken into account, our systems cost much less than chemicals.

**Q. Are the systems corrosive?**

A. No. Zinc is a known anti-corrosive and is the most common element used for metal plating to protect against corrosion.

**Q. Are these magnets?**

A. NO and most definitely NO, NO !!

**Benefits include:**

**Improved efficiency**

**Saved money**

**Decreased downtime**

**Decreased capital investment**

**Extended life of equipment**

**Decreased/eliminated cost of feed line chemicals**

**Saved energy**

**Reduced maintenance & labor**

**Removed/reduced existing scale**

**Reduced fuel costs**

**Decreased blowdown and water use**