YORK® Enhancement Services

ED FILTRON

Advanced Filters For HVAC & Process Cooling

"A typical 200-ton cooling tower in a season, may assimilate upwards of 600 pounds of particulate matter from airborne dust and makeup water supply."

ASHRAE Handbook, 1996

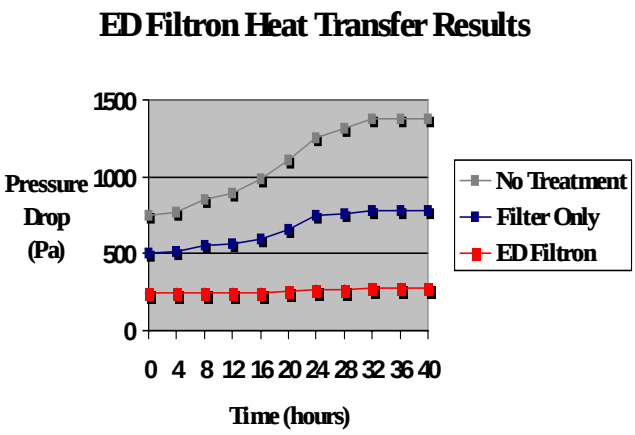
ED Filtron is a revolutionary new sand media filtration system, the first of its kind, specifically designed to prevent scaling in HVAC and process cooling applications. It uses a proprietary, patent-pending technology to precipitate calcium carbonate and other forms of fouling directly in the bulk water, then through 5-micron sand media filtration, removes those scale particles from the water. ED Filtron causes mineral ions to form seed crystals then filters them once they reach the 5-micron level.

ED Filtron is constructed of the highest quality components, including bronze three-way ball valves and electric actuator for automatic backwash / self-cleaning of the sand media; fiberglass, carbon steel or stainless steel filtration vessels; system-matched pump; control panel in NEMA 4X enclosure; all mounted on a single skid.

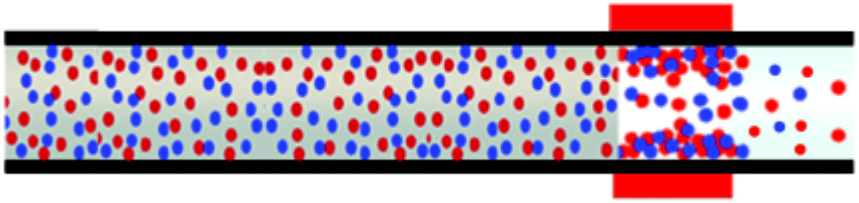
The value of side-stream filtration for water and energy conservation is a concept that is accepted by most Facility Managers, HVAC Managers, Engineers and water treatment professionals. ED Filtron is not designed to substitute chemical water treatment, but rather to complement chemicals and enable them to work even more effectively than at present. Chemical water treatment, such as the use of polymers, prevents dissolved mineral ions from forming scale on chiller heat exchangers. However, suspended solids such as dust, dirt, soot and pollen that are scrubbed through the cooling tower can vary in concentration through the course of a cooling season. These materials which may fluctuate dramatically from week to week are removed by the ED Filton Advanced Filtration System. Moreover ED Filtron actively precipitates calcium carbonate in the bulk water, helping the condenser tubes clean, then removing those particles from the bulk water by sand filtration.

Scientific Testing Evidence

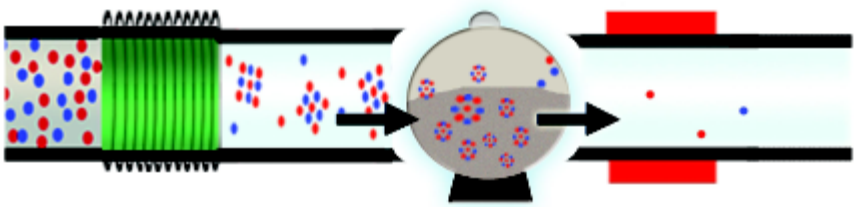
A study published in the International Journal of Heat and Mass Transfer, ED Filtron proved to keep a heat exchanger clean over time. It was performed in a laboratory setting under extremely aggressive water conditions: high hardness, high heat flux, and low water velocity. Within 40 hours the “No treatment” case had fouled severely, creating a large pressure drop across the test heat exchanger, whereas ED Filtron was able to keep the pressure drop to a negligible level. Filtration alone and ED 2000 (Electronic Anti-Fouling technology or “EAFT”) alone also provided excellent water treatment performance under these very aggressive conditions.



TYPICAL HEAT EXCHANGER



HEAT EXCHANGER WITH ED Filtron



Filter Specification

Filter Model	Valve Size in / mm	Motor hp / kw	Filter Area ft2 / m2	Flow Rate gpm / ls
Filtron-20	2 / 50.80	1 / .75	2.18 / 0.20	43 / 2.71
Filtron-24	2 / 50.80	2 / 1.49	3.14 / 0.29	63 / 3.97
Filtron-30	2 / 50.80	3 / 2.23	4.91 / 0.46	98 / 6.18
Filtron-36	3 / 76.20	3 / 2.23	7.06 / 0.66	142 / 8.96
Filtron-42	3 / 76.20	5 / 3.73	9.61 / 0.89	192 / 12.11
Filtron-48	3 / 76.20	5 / 3.73	12.05 / 1.12	251 / 15.84

YORK®

P.O. Box 1592, York, Pennsylvania USA 17405-1592