

Cooling Tower Filter for Side Stream Filtration

Fine Particles Are One of the Largest Contributors to Fouling

Typically, over 90% of the suspended solids in a cooling tower are under 5 microns. These fine particles cause many issues for building owners:

- A nutrient source for biofilm, bacteria and Legionella
- Energy efficiency levels are decreased
- Major wear and tear of process equipment, pump seals and motor bearings causing forced shut-downs
- Water treatment chemicals perform less efficiently

The Cost of Not Filtering Fine Particles

- Fine particles adhere to heat exchanger, control valves, piping, and cooling tower fill. When this occurs, water cannot achieve the proper temperature drop
- Sludge buildup reduces chemical effectiveness, resulting in higher dosing
- All equipment in contact with the water will be at risk
- Health risks, microbiological growth, microbiological induced corrosion, biofilm and biofouling occur



Fine particles clog the tower packing reducing the ability to cool the recirculation water.

Legionella Risks Associated with Cooling Tower Filters

Nearly all cooling towers that have been linked to outbreaks of Legionella infections have been found to be poorly treated.* Without proper filtration for ongoing removal of suspended solids, Legionella is likely to proliferate. Filtration is considered a useful support tool for ongoing removal of suspended matter which could otherwise contribute to the proliferation of the Legionella organism. Legionella bacterial thrives in cooling system with biofilm. The amount of smaller particles present in cooling tower filters gives biofilm more surface area in which to grow. It is essential that filtration remove particles down to 1 micron or less.

Actual results of cooling tower water before and after NuStream Filtration

Micron Size	Before NuStream	After NuStream	Percent Removal
1	5,234,311	6,154	>99%
2	2,949,364	2,615	>99%
3	2,487,514	1,384	>99%
4	1,004,728	808	>99%
5 – 8	480,349	678	>99%
9 – 12	77,745	299	>99%
13 +	24,308	38	>99%

*Legionella 2019: A Position Statement and Guidance Document, AWT

**NuStream Cooling
Tower Filters
remove more than
99% of suspended
solids all the way
down to <1 micron.**



CT70, service flow rate of 70 GPM

CT30, service flow rate of 30 GPM.

	Model CT30	Model CT70
Service Flow Rate	30 GPM	70 GPM
Backwash Flow Rate	12 GPM	35 GPM
Tank Diameter	14"	24"
Outside Dimensions	21.5" w x 25.32" d x 68.8" h	35.5" w x 39.5" d x 80" h
Working Pressure	10 – 85 PSI	10 – 85 PSI
Inlet Connection	1.25" FNPT	2" FNPT
Outlet Connection	1.25" MNPT	2" MNPT
Drain Connection	1" MNPT	1.5" MNPT
Clean Water BW Connection	1" FNPT	1" FNPT
ETL UL/CSA Certified	Yes	Yes
Pump Motor TEFC HorsePower	1.5 HP, 115V, 20 AMP	4 HP
Pump Motor Voltage / AMP	115V / 20 AMP, Dedicated	208V = 9.0 AMP 230V = 8.5 AMP 460V = 4.3 AMP 575V = 3.7 AMP
Approximate Shipping Weight	760 lbs (2 crates)	1303 lbs (2 crates)
Approximate Operating Weight	980 lbs	1660 lbs

