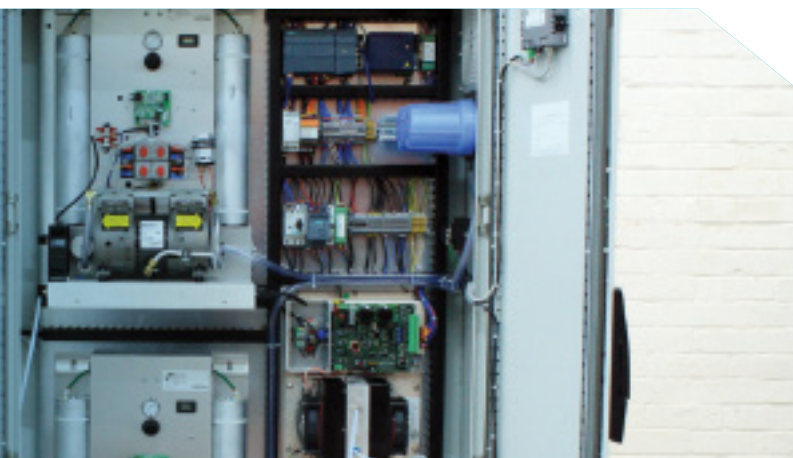


SOCOTEC's Filtex Ozone Generators



Helping you dramatically reduce operating costs and carbon footprint.

Water control systems used in the majority of cooling towers are chemical biocide based, all of which eventually reach the environment leaving a damaging and costly carbon footprint.

The Health and Safety Executive's Approved Code of Practice (ACoP) regarding Legionnaires Disease for evaporative cooling systems (1.32/L8 4th edition) states that, "The components of the water treatment programme should be environmentally acceptable".

The chemical consumption in UK cooling towers is 22,000 tonnes per annum - as a conservative estimate and increasing - with the City of London square mile accounting for 107 tonnes every year.*

Filtex Ozone eliminates the need for chemical biocide

Ozone can also offer a completely chemical free system, without the need for inhibitor, by using stainless steel cooling towers and a local stainless steel heat exchanger. Further benefits include the virtual elimination of health and safety risks associated with chemical handling and chemical storage.

Ozone is produced on site by an oxygen separator and corona generator and is dosed continuously to maintain a set level in the cooling system. For most applications this is within the range of 0.05 – 0.5mg/l. Where cooling system circulation time is rarely more than five minutes, Ozone's short half-life of 10 – 20 minutes does not pose any problems.

Ozone is a clean and safe technology, widely recognised in the food, beverage and pharmaceutical industries where its total effectiveness against bacteria and pathogens is used for both water and surface disinfection.

Source *: Building Engineer Magazine, 2009

FILTEX OZONE REDUCES WATER CONSUMPTION

Water suppliers are being tasked by the Government to ask their consumers to assess their water usage and advise how to reduce it. With growing demand, water is becoming more of a commodity, with restricted supply, and prices are reflecting this.

Chemical systems run on average a three to four cycle concentration factor due to pH and effect on bromine

dosing, even in stainless steel towers, where Ozone is only limited to the conductivity threshold dictated by the tower manufacturer and in general, achieves five cycles. This has an impact on water usage and can save an estimated 432m³/year in makeup water on an average sized system. At SOCOTEC we can advise the best course of action in regard to reducing your water usage and providing you with the best technical expertise.

ESTIMATED OZONE VS CHEMICAL COST COMPARISON* (BASED ON A 3400KW REJECTION COOLING TOWER RUNNING 3,000 HOURS PER YEAR @ 30 PER CENT LOAD)					
		BROMINE TREATMENT COSTS		OZONE TREATMENT COSTS	
	UNITS	3.5 CYCLE BROMINE TREATMENT		5 CYCLE OZONE TREATMENT	
Cost of Bleed off	M ³ /year	1512	£4,006	1080	£2,862
Cost of Make-up	M ³ /year	5400	£10,530	4968	£9,688
Inhibitor	litres	150	£1,109	200	£853
Biocide A&B combined	litres	1410	£8,663	0	£0.00
Overall cost of chemical treatment including deliveries	£		£10,197		£1,013
Annual cost of running system including: chemical, water and maintenance charges	£		£22,766		£14,739
Capital cost of equipment including sidestream filtration excludes installation	£		£14,786		£44,219
Capital cost of softening plant	£		£4,579		£3,977
Payback based on difference in capital cost and treatment costs	Years	3.4 years			

FILTEX OZONE COOLING TOWER TREATMENT OFFERS:

- > Environmentally friendly treatment
- > Residual protection against Legionella and other bacteria
- > Excellent biofilm removal
- > Reduced operating costs and carbon footprint
- > Reduced water make-up and effluent costs
- > Release of valuable floor space required for chemical storage
- > Reduced chemical deliveries to site
- > Reduced health and safety risks
- > Clean technology with options for water recycling
- > The prevention of mechanical error or accidental valve opening and purging thousands of pounds worth of chemical down the drain

*Figures calculated based on average water supply and discharge prices and chemical prices, including annual servicing. Correct at time of print - 2018

MORE ABOUT OUR SERVICES

If you would like to find out more information regarding Filtex Ozone, call 0845 603 2112 or email salesuk@socotec.com

