OPTImaster™ FAQs

Do you have a question about *OPTImaster™* that hasn't been answered here? Please [contact us](#) for further assistance.

What is OPTImaster™ ?

OPTImaster™ is software that automatically selects optimum dissolved oxygen concentrations (DO) and solids retention time (SRT, or sludge age) on a regular basis.

How do DO and SRT affect the activated sludge process?

Decrease of DO or sludge age below optimum values causes sludge settling and flocculation problems and deterioration of the nitrification process. When DO increases above its optimum value, energy is wasted and a denitrification part of the BNR process may deteriorate. When sludge age increases above its optimum value it may cause pin floc, foaming, and undesirable nitrification in a conventional activated sludge process.

My activated sludge process has been performing perfectly. Why do I need to optimize?

Even if your process has been performing reliably, it may not be fully optimized. With full optimization, you will enjoy the same level of performance with energy savings and a carbon footprint reduction of up to 25 percent.

Isn't DO=2 mg/l the best set point for DO?

Unfortunately, there is not a "one size fits all" DO set point. Depending on the type of activated sludge process, sludge age, design of the aeration tanks, and the location of the DO sensor, optimum DO could be as low as 0.5 mg/l or as high as 5 mg/l. And even if you know that your process performs well at DO=2 mg/l, it may be possible to achieve the same results with a lower DO and a different sludge age, and, as a result, save energy and reduce your plant's carbon foot print.

Why should I use OPTImaster™ instead of calculating optimum sludge age and dissolved oxygen concentration (DO) set points on my own?

Traditionally, the DO and sludge age set points are selected based on operating experience. Once selected, the set points should be reviewed frequently, but in practice the set points are rarely updated and, as a result, are not optimized.

OPTImaster™ updates set points regularly using automated, precise data analysis. Operation under optimum conditions 365 days a year leads to improvements of plant reliability and energy savings, and therefore reduction of carbon emissions.

I have a DO control system. How is OPTImaster™ different?

OPTImaster^{TM} is not a control system, it is a DO and sludge age targets advisory system. *OPTImaster^{TM}* calculates and recommends set points based on actual activated sludge effluent quality measurements, and updates the set point recommendation every time new measurements are taken.

Are the set points recommended by OPTImaster^{TM} sent into the control systems electronically?

While electronic communication is possible, it is not recommended. An operator should make the final decision on whether to accept *OPTImaster^{TM}* recommendations.

What if I do not have historical data in electronic format?

The historical as well as the new data will need to be entered manually, on a daily basis. Ekster and Associates can provide these data entry services to you.