

Dissolved Oxygen Sensor Life Expectancy**How long should a DO sensor last in storage?**

OxyProbes can be stored for several months from date of shipment with no appreciable change in their performance or expected service life. After a few months, the sensors are still good but they will probably need to have the membrane removed and refilled with electrolyte. Customers generally try to rotate stock so sensors are put into service prior to two months from shipment, and this would be our recommendation for most customers.

How long should a DO sensor last in actual service?

OxyProbe DO sensors exhibit a fairly predictable lifespan under continuous use. Typically they need to be rebuilt every two years, depending upon the severity of the service. The higher the temperature, the shorter the life; and, the longer the duration of exposure to elevated temperature, the shorter the life. Maximum temperature advisable is 135°C.

For example:

An OxyProbe may last 2 years autoclaved bi-monthly at 121°C for 30 minutes.

An OxyProbe may last 1 year autoclaved weekly at 121°C for 30 minutes.

The actual service life attained will depend upon all other considerations, such as whether or not the sensor is exposed to high pressure or mechanical vibration, whether or not the membrane is punctured and media enters the inside, etc.. Since there are many variables and factors involved in determining sensor life, an operator can best determine the life for their particular vessel and set of conditions experimentally. By careful recording of when the sensors are installed and a statistical analysis of typical life, one can determine the optimum number of cycles.

There is a normal variance in sensor life and most operators of production vessels will search out a timespan, perhaps 1-2 years, that gives them a maximum confidence in the ability to run a cycle without failure. It is a helpful exercise to take the cost of a sensor rebuild and divide by the number of cycles, then determine if the "cost per cycle" is justifiable for a particular product.

For example, assuming a sensor rebuild costs £556 and you batch 26 runs per year:

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If rebuilding once a year, the cost per run/per sensor would be about £21 (£556/26).

If rebuilding every 2 years, the cost per run/per sensor would be about £10 (£556/52).

So, the decision to be made is if it is worth the extra £10 per run/per sensor to minimize the risk of failure. Few customers run this many batches per year, and our experience has shown that one rebuild every 2 years is a good average.

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