

# Customer Case Study

**WEDECO**  
a xylem brand  
**OptiDetect**

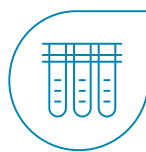
**Xylem developed a new way to monitor for quartz sleeve breakage on drinking water ultraviolet light (UV) disinfection systems. The disruptive solution notifies the customer of breakage within one second.**



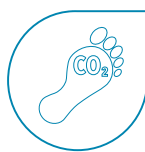
REDUCING  
LEAKAGE



REDUCING  
ENERGY



REDUCING  
POLLUTION



REDUCING  
EMISSIONS



REDUCING  
WATER USE

### The solution

The water industry specification for clean drinking water UV systems includes a requirement to monitor systems for quartz sleeve breakage, a signal usually triggered by electrical failure. OptiDetect is a new pressure monitoring system that instantly recognises a quartz sleeve fail and shuts the system down. It means customers can avoid the imminent danger of shards or materials flowing through the pipework and provides round-the-clock quartz sleeve breakage safety and smooth operation.

### The process

Our UK team collaborated with Xylem's in-house UV research and development teams, our manufacturing facility in Germany, and our sensor research and development facility in Cambridge, UK, to prototype a system. This was tested with the customer and then refined. The updated prototype was accepted as the agreed design between Xylem and the customer before commercialisation and manufacturing. This solution is now available as standard on most of Xylem's drinking water reactors.

### The outcome

Xylem was able, at pace, to develop a safety monitoring system for UV systems. Not only does OptiDetect identify a failure and shut down the system quicker than any other technology on the market, it also protects our customers' operations by preventing unnecessary damage and minimising water waste. Because OptiDetect is a separate control loop, independent of the UV system's electrical cabinet, the reactor can be completely shut down for maintenance work without losing system protection.

***"OptiDetect monitors conditions in the UV quartz sleeve rather than deriving the signal from lamp fail or short circuit. For the customer, this means increased reliability, maximising uptime, protecting the network and disposing of less water than other solutions in the event of a quartz breakage."***

**Phil Venables** General Manager Projects and Customer Service, Xylem UK & Ireland

**18 months**  
from voice of  
customer to  
implementation

**WIMES  
& DWI**  
specification  
compliant

**1**  
second detection  
of breakage or  
rupture

**Zero**  
down time for  
maintenance  
on electrical  
cabinets

**Countdown to zero.**

**xylem**  
Let's Solve Water