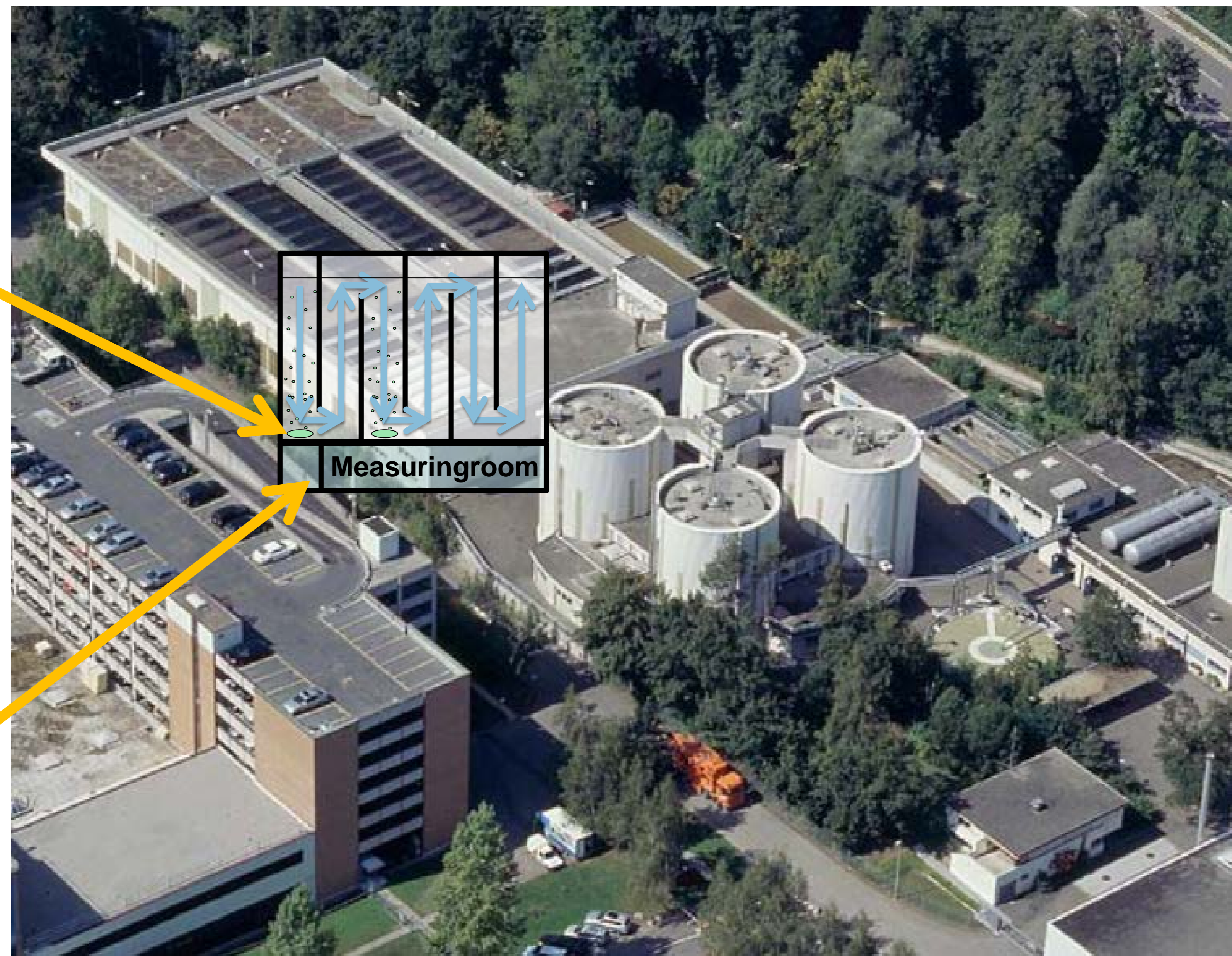# OZONATION: Reactor and Measurement

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Ozone Production On-Site

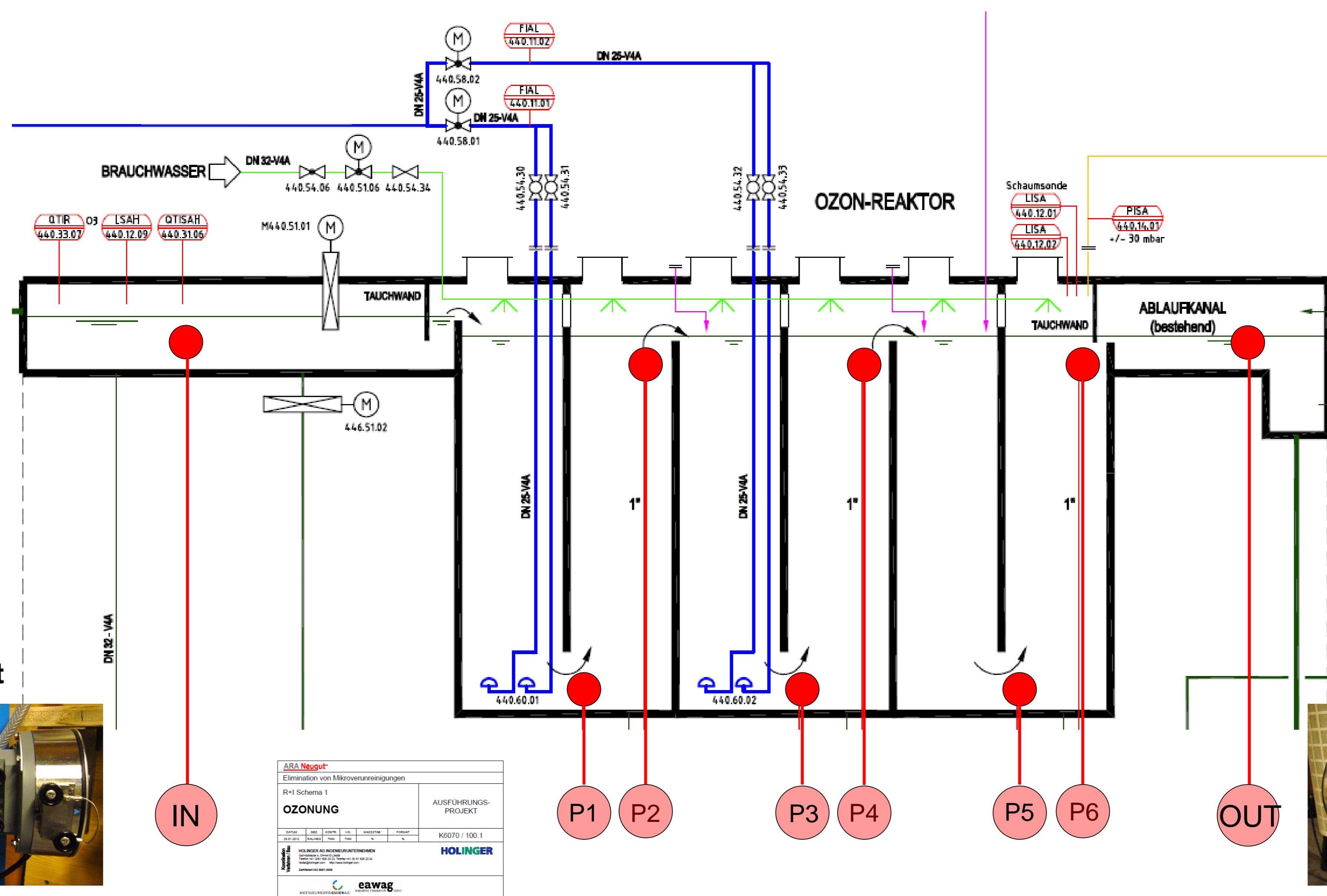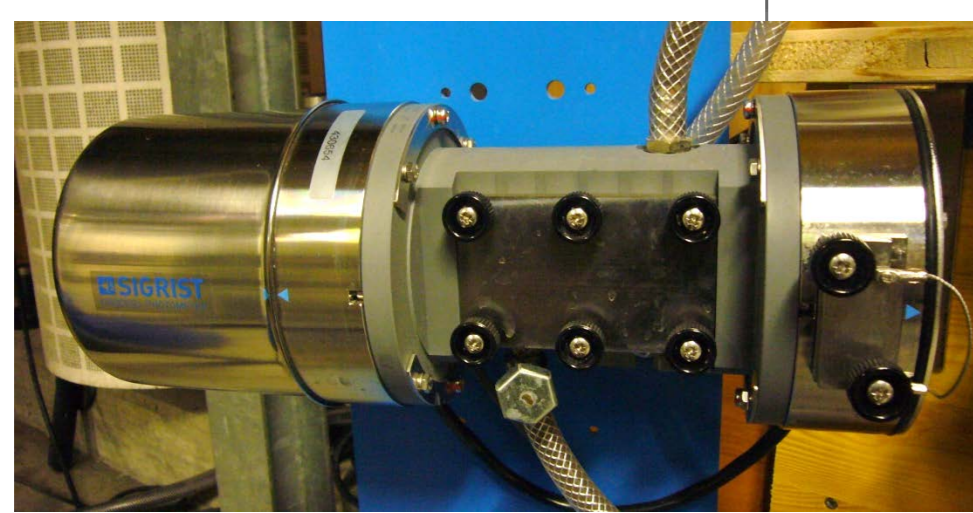## Ozone Reactor Dimensions

Volume Reactor:

530 m^3

Retention times:

33 min (Q$_{TW,Mittel}$)
12 min (Q$_{RW,Max}$)

Ozone Dosage during dry weather:
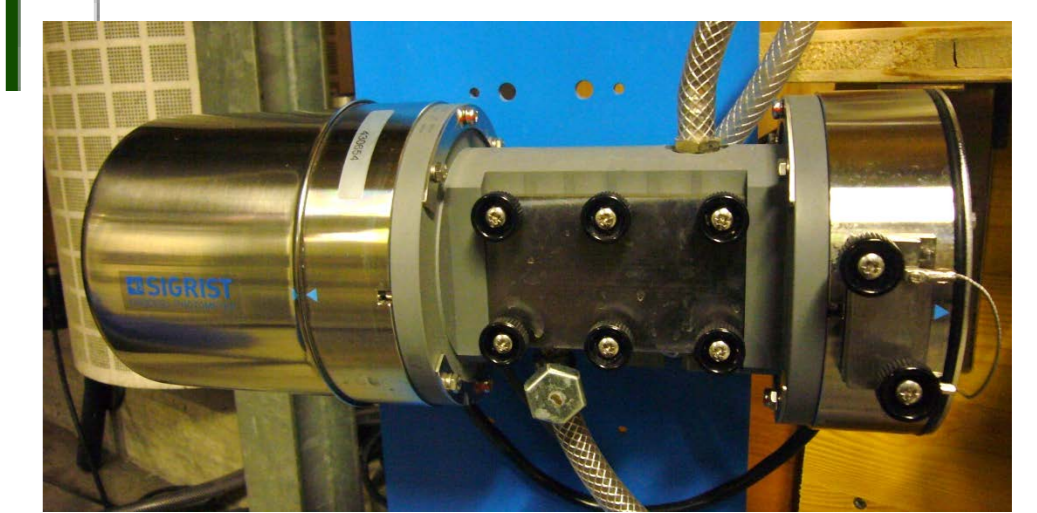
0.6 -1 g O$_3$/g DOC

Inlet: UV - Measurement

Ozone Application:

Possibility to apply Ozone in the first and the third compartment

Sampling Points:

In the In- and the Outlet of the reactor and six sampling points within the reactor.

Outlet: UV - Measurement

IN   P1 P2   P3 P4   P5 P6   OUT

Measuring Room

Inlet	Sampling points within the ozone reactor	Outlet
IN	P1 P2 P3 P4 P5 P6	OUT
Measurements: DOC, Nitirt, Leitfähigkeit, pH, UV (254nm + 366 nm)	**Measurements:** O3, RedOx, pH, UV (254nm + 366 nm)	**Measurements:** UV (254nm + 366 nm)

Inlet is continuously or semi-continuously for feed-forward control of the ozone application.

Sampling within the reactor can be used to monitor the behaviour of ozone decay throughout the reactor to optimize the system. To prevent shortcuts of non ozonated water and improve the flow pattern within the reactor horizontal buffels can be installed if required.

The measurements at the outlet can be used to optimize the ozone application by feed-back control. The decrease in extinction gives also a direct information about the stability and efficiency of the ozonation process.

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