OZONIA

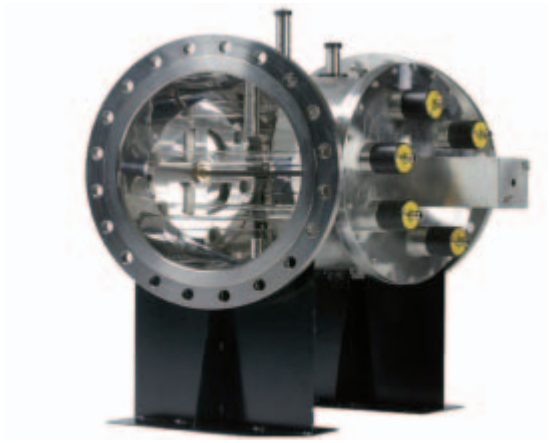
AQUARAY® H_2O

UV Systems for Drinking Water

UV DISINFECTION | MEDIUM PRESSURE | DVGW VALIDATED | DRINKING WATER

← Applications

- Drinking water disinfection



← Main characteristics

- High capacity with low number of medium pressure lamps
- Dedicated and calibrated UV intensity sensors for each lamp, to ensure optimum reliability
- Automatic wipers for quartz sleeve cleaning
- Meets all US EPA and DVGW guideline

The Aquaray® H_2O is able to treat from 300 to 8600 m^3/h. This reactor eliminates pathogens with a powerful dose of UV light delivered by strategically placed medium pressure lamps.

MAIN FEATURES

→ **Optimized performance:**
The Aquaray® H_2O has been optimized with CFD modeling software to maximize UV dose and minimize head loss.

→ **Energy conservation:**
Due to the electronic variable output ballast, the total power can be adjusted based on the demand.

→ **Save space:**
To minimize the footprint, the Aquaray® H_2O uses Medium Pressure lamps with high power density.

→ **Validated performance:**
The Aquaray® H_2O has been third party validated and obtained DVGW certification upon completion of strict bioassay testing.

UV TECHNOLOGY: Aquaray® H_2O

The Aquaray®H_2O units have been designed to disinfect drinking water. The germicidal effect of the UV light inactivates most micro-organisms such as bacteria, viruses and parasites. UV is known to be particularly efficient to inactivate *Cryptosporidium Parvum* and *Giardia Lamblia*.

The UV dose (UV intensity x contact time) defines the treatment efficiency which is provided by the unit. The effective dose applied depends on the UV transmittance of water to be treated as well as the proper hydraulic design of the unit.

HOW IT WORKS

The medium pressure lamps are powered by electronic ballasts. The lamps are inserted in pure quartz sleeves isolating them from the water. The lamps can be easily changed without draining of reactor.

DVGW approved UV sensors are installed to monitor UV intensity. Easy access to all components allows for rapid and simple maintenance.

suez environnement | Degrémont

TECHNICAL DATA

Model	Number of reactor	Flow Rate	Number of lamp	Electrical Power per lamp	Installed Electrical Power
		m^3/h		kW	kW
Aquaray® H_2O 20"	1	1420	6	4	24
Aquaray® H_2O 'Duplex' 20"	2 (in series)	3000	2 x 6		48
Aquaray® H_2O 36"	1	8600	10	8	80

Based on 40 mj/cm^2 and 95% UVT

- **Lamp Type:** medium pressure
- **Ballast Type:** electronic variable output (20-100%)
- **Sensor Type:** DVGW approved
- **Lamp configuration:** horizontal cross flow
- **Average lamp life:** 10 000 - 12 000 hours

Materials

- **Reactor material:** 316L stainless steel/quartz sleeves/ silicon O-ring
- **Panel material:** mild steel epoxy coated

Standards

- **Flanges:** DN 500 (20")
- **Reactor pressure rating:** 10 barg
- **Main power supply:** 400-480V/3ph+N/50-60Hz
- **Earthing System:** TNS
- **Panel rating:** IP54

Remote controls and alarms

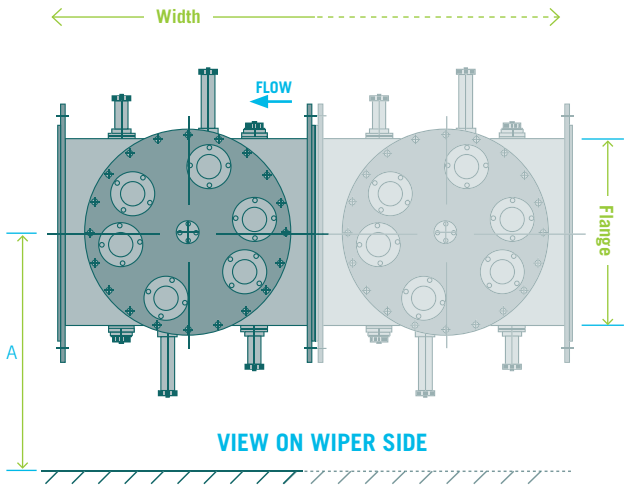
- **SCADA communication capability**
- **Various alarms** (low UV intensity,...)

Options

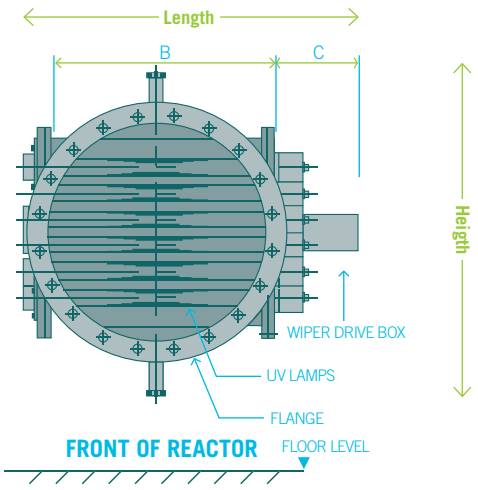
- **Stainless steel control panel**
- **Alternate PLC and interface**

DIMENSIONS

Model	Number of reactor	Dimensions (mm)			Weight	Flange	l x h x w
		A	B	C	kg	mm	mm
Aquaray® H_2O 20"	1	650	600	420	350	500	1080 x 880 x 700
Aquaray® H_2O 'Duplex' 20"	2 (in series)	650	600	420	700	500	1080 x 880 x 1400
Aquaray® H_2O 36"	1	1160	1020	420	550	900	1580 x 1750 x 1160



VIEW ON WIPER SIDE



FRONT OF REACTOR

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