Ozone System OZONFILT® OZVb

Powerful and environmentally-friendly disinfection and oxidation

Ozone capacity 10 – 70 g ozone/h

Ozone systems OZONFILT® OZVb are pressurised systems in which compressed air is fed into the ozone generator.

Ozone is generated from the oxygen content of the surrounding air, via a compressor and is inducted into the process based on demand. Ozone can now be generated in values of up to 20 g/Nm^3, safely and reliably in the many demanding environments and plant room locations globally. Ozone concentrations within the water to be treated with values of between 3 and 12 ppm can be achieved using our coordinated mixing equipment with an efficiency of up to 95%.

Your benefits

- Safe and seamless operation through continuous monitoring of all relevant operating data
- Simple, safe and reliable operation with process visualisation, thanks to a large, coloured and clearly arranged 4.3" touch panel
- Compact system with integral air treatment
- Turnkey complete system with perfectly coordinated mixing device including back pressure valve, vacuum breaker and static mixer
- Direct injection without injector system for up to 4 bar back pressure
- Location-independent system monitoring in real time via the DULCOnneX platform: Improved process reliability. Reliability and transparency due to real-time monitoring, individual alarms and automated reports.

Field of application

- **Potable water supply**: Oxidation of iron, manganese and arsenic, refinement and taste enhancement and disinfection
- **Waste water treatment**: Degradation / reduction of COD and micro-contaminants, reduction of sewage sludge
- **Food and beverage industry**: Oxidation of iron and manganese, disinfection of table water and rinser water
- **Swimming pools**: Degradation of disinfection by-products, reliable microbiological barrier and production of crystal-clear water, thanks to its micro-flocculating effect
- **Industry**: Legionella prevention and disinfection of cooling water

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Technical Data

Ambient parameters

Max. 85% air humidity of the ambient air, non-condensing, non-corrosive, dust-free, max. ambient temperature: 40 °C (with integrated air conditioning system: 50 °C)

		OZVb 1	OZVb 2	OZVb 3	OZVb 4
Number of generator modules		1	1	1	2
Nominal ozone capacity, measured according to DIN standards for air: 20 °C, Cooling water: 15 °C, 0.8-2 bar	g/h	10	20	35	70
Ozone output max. 2.5 bar	g/h	8.0	16.0	28.0	56.0
Ozone output max. 3.0 bar	g/h	6.2	12.4	21.7	43.4
Ozone output max. 3.5 bar	g/h	4.4	8.8	15.4	30.8
Air consumption (only ozone generation)	Nm^3/h	0.50	1.00	1.75	3.50
Ozone concentration in the gas phase based on standard conditions and nominal power	g/Nm^3 *	20	20	20	20
Specific energy requirement at nominal capacity	Wh/g	16.5	16.5	16.5	16.5

* $Nm^3 = m^3$ under normal [standard] conditions (p = 1.013×10^5 Pa, T = 273 K)

Electrical Connection

		OZVb 1	OZVb 2	OZVb 3	OZVb 4
Connected load	V/Hz/A	230/50;60/2	230/50;60/6	230/50;60/6	230/50;60/10
Enclosure rating		IP 54	IP 54	IP 54	IP 54
Degree of protection with integrated air conditioning unit (internal/external)		IP 54 / IP 34	IP 54 / IP 34	IP 54 / IP 34	IP 54 / IP 34

Overall Dimensions (Without Mixer)

Wall-mounted cabinet with OZVb 1, 2 and 3; floor-mounted cabinet with OZVb 4

		OZVb 1	OZVb 2	OZVb 3	OZVb 4
Width	mm	760	760	800	800
Height	mm	760	760	1,000	1,200
Depth	mm	300	300	300	300

Weight

		OZVb 1	OZVb 2	OZVb 3	OZVb 4
Weight	kg	80	80	95	140

Ozone Mixing

		OZVb 1	OZVb 2	OZVb 3	OZVb 4
Max. raw water temperature	°C	35	35	35	35
Permissible pressure at ozone outlet	bar	0.8–4.0	0.8–4.0	0.8–4.0	0.8–4.0

Air Supply

		OZVb 1	OZVb 2	OZVb 3	OZVb 4
Air demand	Nl/min	11.1	22	38	76

Air quality	Oil and dust-free, non-corrosive, constant priming pressure of 4.5 – 10 bar, max. temperature 40 ° C

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Cooling Water

		OZVb 1	OZVb 2	OZVb 3	OZVb 4
Cooling water consumption (15 °C)	l/h	10	20	35	70
Cooling water inlet pressure	bar	1–5	1–5	1–5	1–5
Cooling water inlet		G 1/4" female	G 1/4" female	G 1/4" female	G 1/4" female
Cooling water outlet, open discharge		G 1/4" female	G 1/4" female	G 1/4" female	G 1/4" female
Cooling water temperature at ambient temp. max. 35 °C	°C	<30	<30	<30	<30
Cooling water temperature at ambient temp. 35–40 °C	°C	<25	<25	<25	<25

Cooling water quality

No tendency to form lime scale, no corrosive components; substances with a tendency to sediment: < 0.1 ml/l; iron: < 0.2 mg/l; manganese: < 0.05 mg/l;conductivity: > 100 µS/cm; chloride: < 250 mg/l

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