Ozonia* Membrel MkV

Electrolytic Ozone Generators

FACT SHEET

The most effective way to disinfect pure/ultrapure water systems in industrial and pharmaceutical applications.

Product Overview

The **Ozonia Membrel MkV** is the latest generation of electrolytic ozone generators which uses solid polymer electrolyte and simple, user-friendly controls for ozone production. The **Ozonia Membrel MkV** electrolytic process is a **unique technology which produces ozone from water** instead of gaseous air or oxygen. The ozone is generated and used directly within the pure water system after multiple treatment processes have purified the raw/ source water.

How it works:

The feed water, taken from the main Pure/UPW loop, enters the ozone producing cell where it dissociated into its two elements at the contact surface between the anode and the electrochemically stable membrane. On the anode side a portion of the liberated oxygen is converted into ozone which is quickly absorbed by the feed water. The water/ oxygen/ozone mixture leaving the cell is reintroduced to the main body of water circulating in the loop.

The installation of an **Ozonia Membrel MkV** is an effective way of sanitizing a pure water loop. The ozone is produced from the pure water directly, removing the contamination source from the system, and no additional injection system is required.

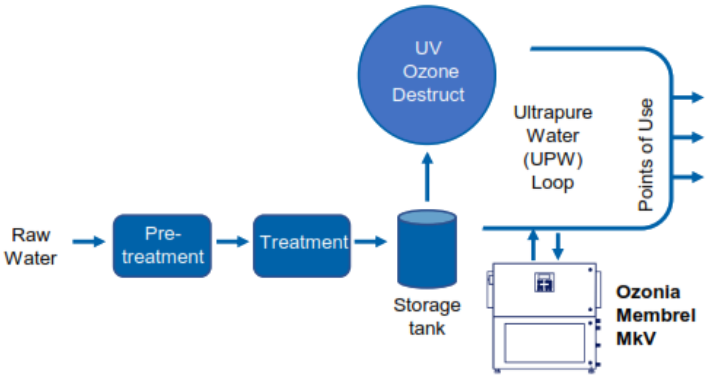
By dosing an ozone level of 30 to 100 ppb the colony forming unit count and formation of bio-film is kept to a minimum. Where ozone is undesirable in the process, an ultraviolet irradiation ozone destruct unit is installed prior to the point of use.

Product features

- Electrolytic ozone production
- Easily upgradeable from 3 g O_3/h to 9 g O_3/h
- User-friendly with individual cell controls
- Remote control capabilities
- No contaminant introduction
- Easily installed, maintaining system integrity
- FDA, EU, EN material certifications
- Integrated flow control

Applications

- Pure & ultrapure water
- Purified & highly-purified water
- Water for injection
- Purified water (PW, UPW, etc) in:
  - Pharmaceuticals
  - Medical technologies
  - Cosmetics & Personal care products
  - Semiconductors
  - Other high purity applications



Technical features

- **Power supply:**
  1ph x 230 VAC +10%/-20%, 50/60 Hz
- **Turndown:** up to 30:1
- **Ambient temperature:**
  +5 to 40°C / +41 to 104°F
- **Design altitude:**
  < 1,000 m.a.s.l. / 3,280 ft.a.s.l.
- **Humidity:** RH < 65% (yearly average)
- **Protection class:** IP 54, Nema 12
- **Conformity:** EN, IEC, ISO, CE, UL, CSA

Materials

- **Enclosure:** 304 SS
- **Wetted surfaces:** 316L SS, titanium, PTFE, PVDF, Viton, PSU; certifications: FDA & EU, EN10204 3.1
- **Process & waste connections:** 316L SS

Complementary equipment

- Ultraviolet ozone destruct unit
- Ozone analysers
- Vent ozone destructor
- Optional triclamp for waste lines

Remote control and alarms

- Ozone production ON/OFF
- Set-value (4-20mA)
- Low flow automatic disconnect
- Voltage & temperature alarms

Connection data

- Mechanical:
  - Purified water: triclamp TC25 10mm ID
  - Waste lines: threaded bulkhead fittings (10mm ID, 12mm OD)
- Electrical:
  - Electrical connection in single phase (230V)

Table 1: Technical data

Model	Ozone pro-duction	Feedwater			Electrical rating (kW)
	g/h	Nominal flow rates (l/h)	Maximum pressure (barg)	Conductivity (µS/cm)	
Ozonia Membrel MkV/1	3	100	<6	<20	0.46
Ozonia Membrel MkV/2	6	200	<6	<20	0.86
Ozonia Membrel MkV/3	9	300	<6	<20	1.27

Ozonia Membrel
MkV/1 - MkV/2 - MkV/3

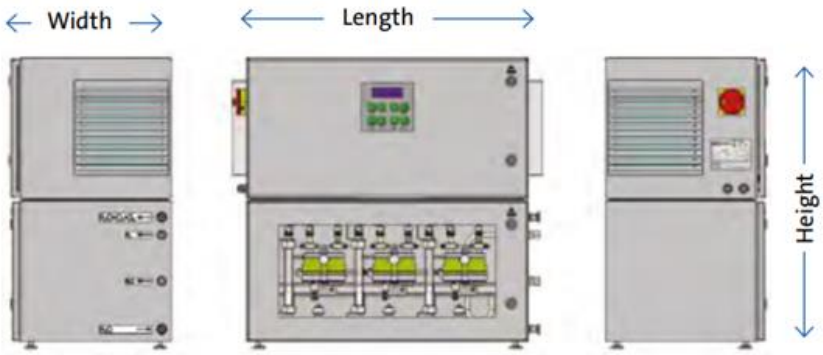


Table 2: Measurements

Model	L x H x W		Weight	
	inch	mm	lb	kg
Ozonia Membrel MkV/1	30.3 x 28.7 x 15.7	770 x 730 x 400	123.5	56
Ozonia Membrel MkV/2	30.3 x 28.7 x 15.7	770 x 730 x 400	134.5	61
Ozonia Membrel MkV/3	30.3 x 28.7 x 15.7	770 x 730 x 400	145.5	66

Veolia Water Technologies
Please contact us via:
www.veoliawatertechnologies.com