

OZONE GENERATOR

GM 1-4 3.0

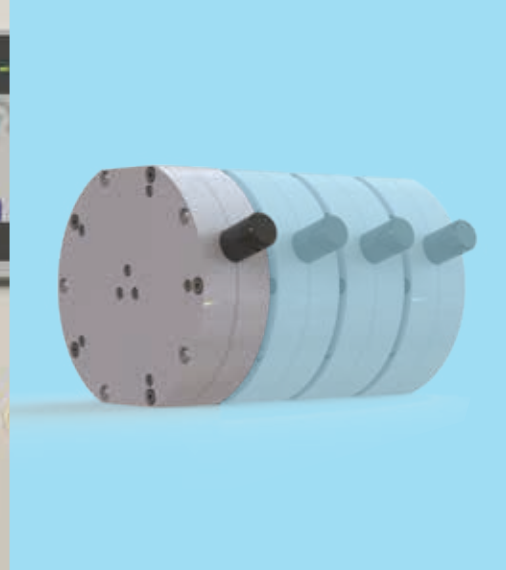
Primozone[®]
REDEFINING OZONE TECHNOLOGY





EMC APPROVED

Electromagnetic compatibility is the ability of electrical equipment to function correctly and not cause unwanted effects such as electromagnetic interference. You don't have to worry about the safety of your electronics and personnel around your ozone generator.



MODULAR

Add reactors for more ozone

**COST-EFFECTIVE
ENERGY SAVER**

**LOW CAPEX
LOW OPEX**

**HIGH PRESSURE &
HIGH CONCENTRATION**

Ozone gas up to 3 bar(g) / 43.5 psig,
300 g/m³ / 20 % by weight



PREMIUM.

THE PRIMEOZONE GENERATOR.

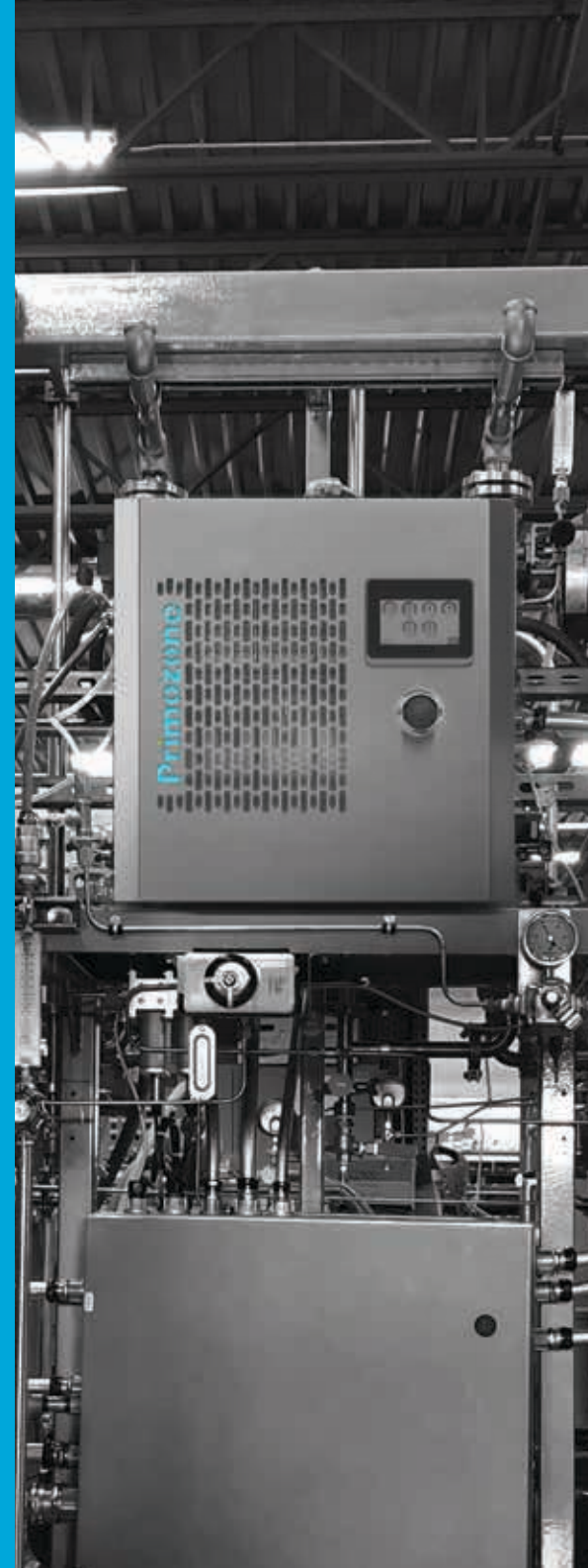
Primozone GM1-4 3.0 high-performance ozone generators are based on Primozone's patented technology to enable reliable ozone production while providing impressively low energy consumption and life-cycle cost.

20 % BY WEIGHT.

Primozone ozone generators produce ozone at a higher concentration than most other commercially available high-capacity ozone generators, delivering ozone at a concentration of up to $300 \text{ g O}_3/\text{m}^3 \text{ O}_2$ – that's equivalent to 20 % by weight, with an absolute gas pressure of 3 bar(g) / 43.5 psig.

TRUSTED.

The combination of high ozone concentration and high gas pressure produced in Primozone generators results in greatly improved efficiency when dissolving ozone gas in water. Tests at the Norwegian Institute of Technology have measured 98 % dissolution in under 3 minutes, proving that Primozone generators are very efficient for water treatment, and cost effective as well. The high gas pressure makes it possible to use alternative injection systems and place the generators at greater distances from a reaction tank, thus increasing flexibility.



EASY TO OPERATE

Operation, control, and integrations made easy.



HIGH PERFORMANCE

High pressure.
Low to high concentration.
 O_3 production: 4 g/h – 240 g/h.
Compact size.



SAFE, QUIET, RELIABLE

Suitable for lab environments.
IP65.
< 45 dB: "library" level.



MODULAR

Independent ozone reactors
and power supplies.



COMPACT DESIGN

Space efficient.
Enables easy retrofitting.



LESS ENERGY, LOWER OPEX

Significant savings in energy use
and cost compared with
traditional ozone solutions.



EXCLUSIVE. INTELLIGENT.

Whatever size ozone generator you need, choosing Primozone means you don't need to compromise on features. All Primozone ozone generators are based on the same redefining ozone technology that delivers world-class ozone production.

The GM series offers ozone generators in 10 standard sizes, and the modular design makes it possible to combine these generators to fit your ozone needs, from small to large demand. Regardless of the capacity needed, Primozone has a suitable solution.

Your application and specific ozone needs determine which standard-size Primozone generators are best for the task. Primozone ozone capacity ranges from 4 g to 2.9 kg O₃/h (0.3 to 153 lbs/day) with a 150–300 g/m³ ozone concentration.

The GM1-4 series ozone capacity is 4 g to 240 g O₃/h (0.3 to 0.5 lbs/day).

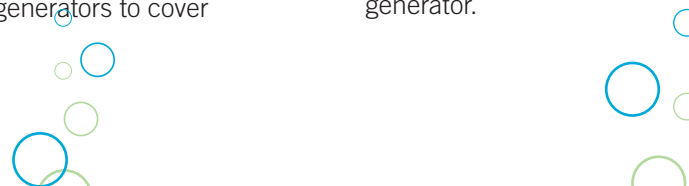
A combination of two or more generators can offer capacity up to 60 kg O₃/h (3,200 lbs/day). Existing systems can be easily upgraded with additional ozone generators to cover future needs.

Primozone ozone generators produce ozone at the exact levels needed at any given time. When ozone production varies according to redox (ORP) value or flow, oxygen and energy consumption for the complete system adjusts accordingly, making the complete solution energy efficient. This is only one of the unique features of the Primozone ozone generator.

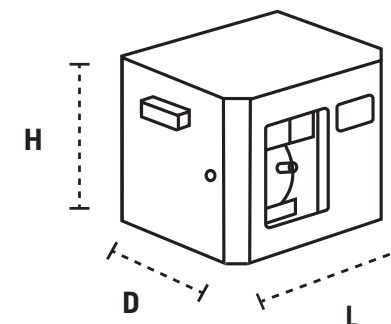
Each generator has an integrated control system to provide safety, monitoring, and control. The system delivers information in real time about ozone levels, gas pressure and gas flow. The ozone generator is equipped with a user-friendly interface for easy operation. The built-in control system will automatically log and handle any production disturbances, such as interruption of the oxygen supply.

The Primozone ozone generator is a complete, plug-and-play system that's easy to install and operate. The modular design makes the generator reliable and very easy to maintain. Most Primozone systems are up and running within 24 hours after delivery.

The small footprint of the Primozone ozone generator offers a great advantage compared to conventional ozone generators. Space requirements can be as low as 20 % compared to those for a standard generator.



TECHNICAL SPECIFICATIONS



GM	OZONE CONCENTRATION		MAX OZONE PRODUCTION		MAX OXYGEN CONSUMPTION			MAX POWER (kW)	LENGTH x DEPTH x HEIGHT	WEIGHT
	g/m ³	%	g/hour	lbs/day	m ³ /h*	l/min*	SCFH*			
GM1	150	10 %	60	3.2	0.41	6.8	15	0.60	603 x 437 x 517 mm 23.7 x 17.2 x 20.3"	36 kg 79.3 lbs
	200	13 %	50	2.6	0.25	4.2	9.5			
	250	17 %	40	2.1	0.16	2.6	6.0			
	300	20 %	27	1.4	0.098	1.6	3.7			
GM2	150	10 %	120	6.3	0.81	14	31	1.2	603 x 437 x 517 mm 23.7 x 17.2 x 20.3"	45 kg 99.2 lbs
	200	13 %	100	5.3	0.50	8.4	19			
	250	17 %	80	4.2	0.32	5.3	12			
	300	20 %	54	2.9	0.20	3.3	7.4			
GM3	150	10 %	180	9.5	1.2	20	46	1.8	603 x 437 x 517 mm 23.7 x 17.2 x 20.3"	52 kg 114.6 lbs
	200	13 %	150	7.9	0.75	13	29			
	250	17 %	120	6.3	0.48	7.9	18			
	300	20 %	81	4.3	0.29	4.9	11			
GM4	150	10 %	240	13	1.6	27	62	2.4	603 x 437 x 517 mm 23.7 x 17.2 x 20.3"	60 kg 132.2 lbs
	200	13 %	200	11	1.0	17	38			
	250	17 %	160	8.3	0.63	11	24			
	300	20 %	110	5.7	0.39	6.5	15			

The above figures can vary ±10 % and apply under the cooling conditions recommended by Primozone.

*These values assume gas properties are standardized at 0 °C / 68 °F and atmospheric pressure.

DETAILED SPECIFICATIONS

	GM1 3.0	GM2 3.0	GM3 3.0	GM4 3.0
Dimensions				
Height	517 mm / 20.4"	517 mm / 20.4"	517 mm 20.4"	517 mm /20.4"
Width	603 mm / 23.7"	603 mm / 23.7"	603 mm / 23.7"	603 mm / 23.7"
Depth	437 mm /17.2"	437 mm /17.2"	437 mm /17.2"	437 mm /17.2"
Weight	36 kg / 75 lbs	45 kg / 99 lbs	52 kg / 110 lbs	60 kg / 130 lbs
Ozone Output				
Max ozone productivity	60 g/h 3.2 lbs/day	120 g/h / 6.3 lbs/day	180 g/h / 9.5 lbs/day	240 g/h / 13 lbs/day
Control range	10% - 100% up tp 250 g O ₃ per m ³ 15% - 100% above 250 g O ₃ per m ³	10% – 100%	10% – 100%	10% – 100%
Feed Gas				
Oxygen purity	> 94 % , < 1% N ₂ , Filtered	> 94%, < 1% N ₂ , Filtered	> 94%, < 1% N ₂ , Filtered	> 94%, < 1% N ₂ , Filtered
Oxygen dew point	< -70 °C / < -94 °F	< -70 °C / < -94 °F	< -70 °C / < -94 °F	< -70 °C / < -94 °F
Max gas pressure at inlet	3 bar(g) / 44 psig	3 bar(g) / 44 psig	3 bar(g) / 44 psig	3 bar(g) / 44 psig
Ozone pressure	< 2.9 bar(g) / < 42 psig	< 2.9 bar(g) / < 42 psig	< 2.9 bar(g) / < 42 psig	< 2.9 bar(g) / < 42 psig
Target inlet gas pressure	2.5 bar(g) / 36 psig	2.5 bar(g) / 36 psig	2.5 bar(g) / 36 psig	2.5 bar(g) / 36 psig
Gas connector	8/6 mm push-on fitting	8/6 mm push-on fitting	8/6 mm push-on fitting	8/6 mm push-on fitting
Max oxygen consumption	6.8l/min / 15 SCFH	14 l/min / 31 SCFH	20 l/min / 46 SCFH	27 l/min / 62 SCFH
Cooling water				
Min water flow	0.11 m ³ /h / 0.48 GPM	0.21 m ³ /h / 0.92 GPM	0.32 m ³ /h / 1.4 GPM	0.42 m ³ /h / 1.8 GPM
Max water pressure	6 bar(g) / 87 psig	6 bar(g) / 87 psig	6 bar(g) / 87 psig	6 bar(g) / 87 psig
Water quality	Drinking water (98/83/EC), closed loop.	Drinking water (98/83/EC), closed loop.	Drinking water (98/83/EC), closed loop.	Drinking water (98/83/EC), closed loop.
Cooling water target T, ΔT	10 °C, 5 °C / 50° F, 9 °C	10 °C, 5 °C / 50° F, 9 °C	10 °C, 5 °C / 50° F, 9 °C	10 °C, 5 °C / 50° F, 9 °C
Water pressure drop	0.4 bar / 6 psi	0.4 bar / 6 psi	0.4 bar / 6 psi	0.4 bar / 6 psi
Water connector	12/10 mm push-in fitting	12/10 mm push-in fitting	12/10 mm push-in fitting	12/10 mm push-in fitting
Cooling agent composition	30 % ethylene glycol, 70 % water			
Power Input				
Power supply	1x230 V + N + PE / AC 50/60 Hz			
Max power	0.6 kW	1.2 kW	1.8 kW	2.4kW
Power factor, full %	0.99	0.99	0.99	0.99
Max fuse	6 A (C type)	10 A (C type)	10 A (C type)	16 A (C type)
Compliance & Certifications				
CE	EN 60204-1:2016, EN 61558-1:2005, EN 61558-2-16:2009, EN 1050: 1997			
FIFRA est. Number	95235-SWE-1			
Noise level	< 45 dB, EN 9614-1:2009			
Ingress protection	IP65, EN 60529:1991 + A1:2000 + A2:2013.IEC 60529:1989 + A1:1999 + A2:2013.			
EMC Emission & Immunity	Emission: EN 55011A:2016 (GM2-1), EN 55011B:2016 (GM1) + A1:2017 EN 61000-3-2:2014, EN 61000-3-3:2013. Immunity: EN 61000-6-2:2005 (GM1-4). EN 61000-4-2, -3, -4, -5, -6, -8, -11 (GM1-4)			