

wassertec
Ozone Systems

BRIGHT BLUE 20G

Bottle Rinsing Ozone Systems

www.wassertec.co.za

Our Commitment

Wassertec Ozone Systems is committed to providing complete peace of mind to our customers by focusing on Quality, Safety, Reliability, Integration , Simplicity and Service.



Quality

We source only the best components and build our systems to the highest international quality standards.



Safety

Compliance with health & safety specifications is a priority. To ensure worker safety, our systems continuously monitor ozone levels and shutdown automatically in an emergency.



Reliability

Wassertec systems are built to last for 10+ years* with minimal maintenance or downtime.



Integration

We provide a complete solution. Products can be integrated with existing systems or customized to meet client specifications.



Simplicity

Our products are designed to be both easy to use and easy to maintain.



Service

Replacement parts can be sourced within 24 hours and experienced service technicians are always available.

* Provided proper maintenance is observed.



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**“The most advanced
ozone system for
bottle rinsing &
package disinfection
currently on
the market”**

Bottle Rinsing and Product Disinfection

The most advanced ozone system for bottle rinsing & package disinfection currently on the market. The Bright Blue 20G has been specifically designed to supply ozone infused water to bottle rinsers so as to aid package disinfection. These systems have been in production and constantly refined since 2001. They are found in Dairy, Juice, Wine & Water bottling plants throughout Africa.



**In-line electronic ozone
measurement and control**
in Parts per Million (PPM).



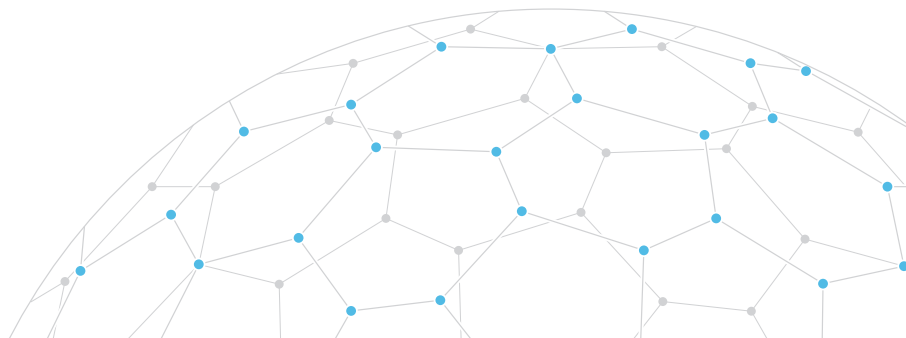
0.8ppm to 1.2ppm
Recommended ozone
residuals for bottle rinsing.
(Adjustable from 0.00
to 2.00 ppm).



1000 ℓ/hour—1000 ℓ/day
Recycling of rinse water
(reduces consumption
from +/- 1000 litres/hour
to +/- 1000 litres/day).



Interlocks to Rinsers
Bottles cannot be rinsed if
ozone level is not correct.



Water Recycling

Reduce Water Consumption

The Bright Blue can be supplied with our water-recycling skid, which captures and re-uses the rinse water. This can reduce water consumption from +/- 1000 litres per hour to around 1000 litres per day.



20G Standard / 1000 litres per hour



20G Recycle / 1000 litres per day



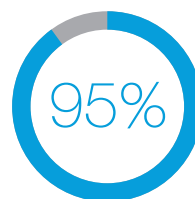
Water Consumption*

20G STANDARD

24 000 litres

20G RECYCLE

1000 litres



Reduction in
Water Consumption

* Based on an average of 24 hours continuous usage. Results may vary depending on application and setup.

Focus on Quality and Reliability

Built to the Highest International Standards

The Bright Blue bottle rinsing and disinfection system has been constantly improved and refined since the first unit was produced in 2001. The Bright Blue CCS complies with EU/ CE standards and conforms to the Coca-Cola Electrical & Mechanical Standards Specifications.

Our focus has always been on quality and reliability, so much so that many of our customers regard our systems as amongst the most reliable in their plant.

If maintenance and servicing procedures are observed then operational life of around 20 years can be expected.





Operation and Maintenance

Easy to Use, Easy to Maintain

The bottle disinfection system is extremely easy to operate and features software developed by Wassertec. Only occasional interventions are required to calibrate the system against an ozone test kit to ensure correct ozone readings are displayed.

The system is controlled by a full colour touchscreen Control Panel. Our unique interface features easy to read dials and icons. Operation is straightforward and intuitive with varying access levels for Operators, Administrators & Technicians.



One Touch On/Off

On a day-to-day basis the operator simply pushes the start/stop button. The Programmable Logic Controller (PLC) does the rest.

For systems making use of the built-in Interlocks, this can be done from the Rinser/Filler control panel.



Diagnostics

The bottle disinfection system features a diagnostic mode which allows the administrator to easily interrogate each of the system's main components. It allows any of the major components to be run independently so that they can be verified.



Ozone Level Set-Point Control

Measurement & control of Ozone ppm (parts per million) in the water is done using a Dr. Reiss GMBH ozone probe and dedicated PID controller.

This allows for accurate control of the desired dissolved ozone level to within as little as 1% of the set-point.



Interlocks

Bright Blue bottle disinfection systems come standard with 4 interlocks using Potential Free Contacts:

1. System Start/Stop
2. S.I.P. (Sterilise in Place)
3. Ozone Level at Set-point
4. System Healthy

The systems can be run in either Local or Remote modes.

Health and Safety

Ensuring Operator Safety

Designed with health and safety in mind. Our systems include built-in safeguards to ensure that operator's lives are not put at risk and meet Coca-Cola Specifications (Electrical and Mechanical) for safety.



“Our systems include built-in safeguards to ensure that operator's lives are not put at risk”

Run under Vacuum, De-Gassing and Ozone Removal

We run with the ozone cells under vacuum. This way if there is an ozone leak, air leaks into the ozone cell as opposed to ozone leaking out. This is inherently safer than running under pressure.

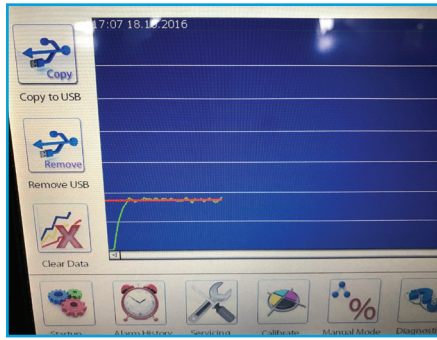
The top of our ozone/water contacting systems feature a special ozone resistant de-gas valve. This allows un-dissolved ozone to be vented safely away from the production area whilst maintaining tank pressure.

Under normal operation there should be no ambient ozone in the production area.

Dräger Ozone Leak Detectors

Our systems have a built-in interface for 2 Dräger ozone leak sensors. These are typically mounted in the bottling hall and in the ozone plant room. They are interlocked to the PLC. In the event of ambient ozone levels exceeding the OHS limit the ozone system will be shut down and a warning displayed.



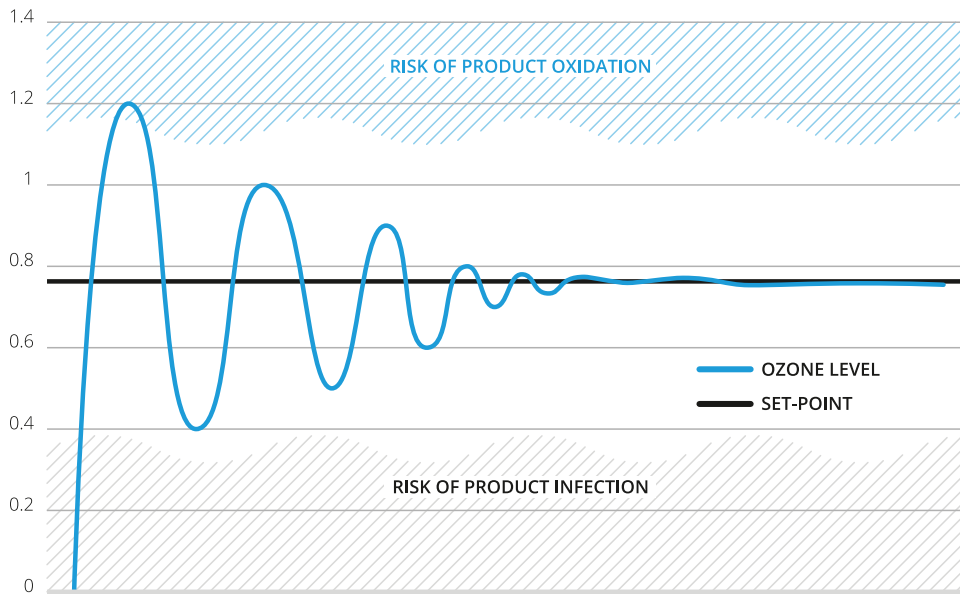


Ozone Control

PID Controller

The level of ozone in the water is controlled using a dedicated PID (proportional-integral-derivative) controller. This continuously measures the level of ozone and the rate of change against the user defined set-point.

The amount of ozone produced is then adjusted proportionally to the rate of change. This allows for very accurate control. The ozone set point is also linked to the "Ozone OK" interlock, so changing the set point automatically changes the value at which the interlock switches.

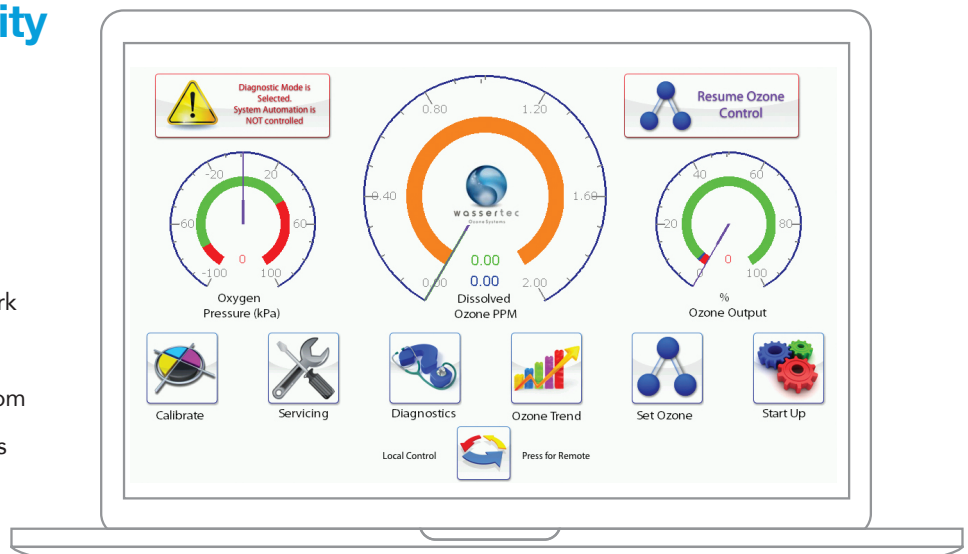


Ethernet Connectivity

Remote Control

We use 10" full colour touch screens, which have optional Ethernet Connectivity.

With the system connected to a network it becomes possible to operate the Ozone Generator by remote control from a Desktop or Laptop PC with full access to all functionality.



Climate Control System

Seifert Air Conditioners

All Bright Blue systems are climate controlled using built-in Seifert air conditioners. This further enhances reliability by keeping the inside of the system clean, cool and dry.

Clean

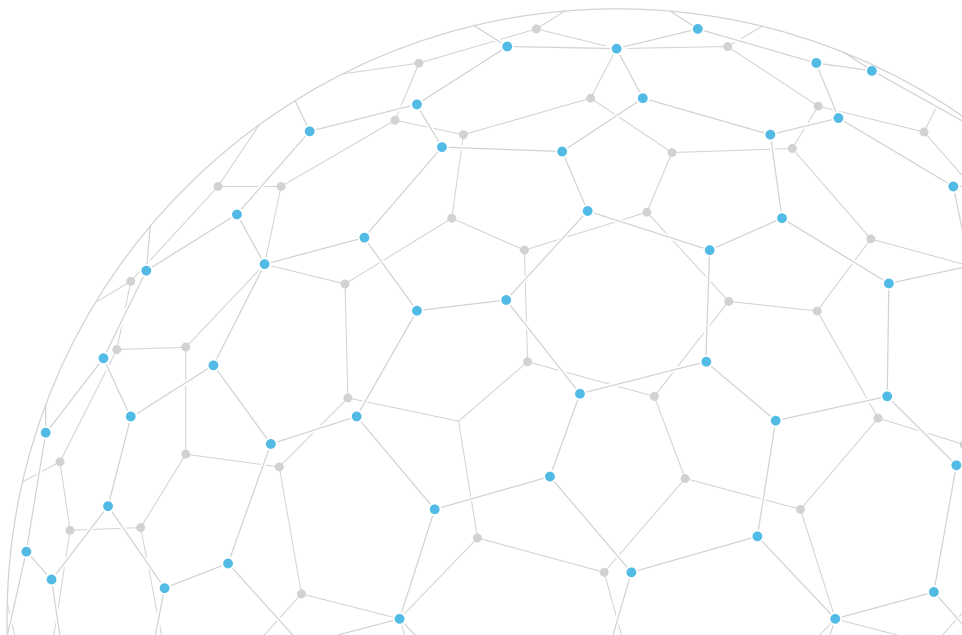
By preventing dust from entering the panel, the systems stay clean - ensuring that components last longer and allowing for easier maintenance.

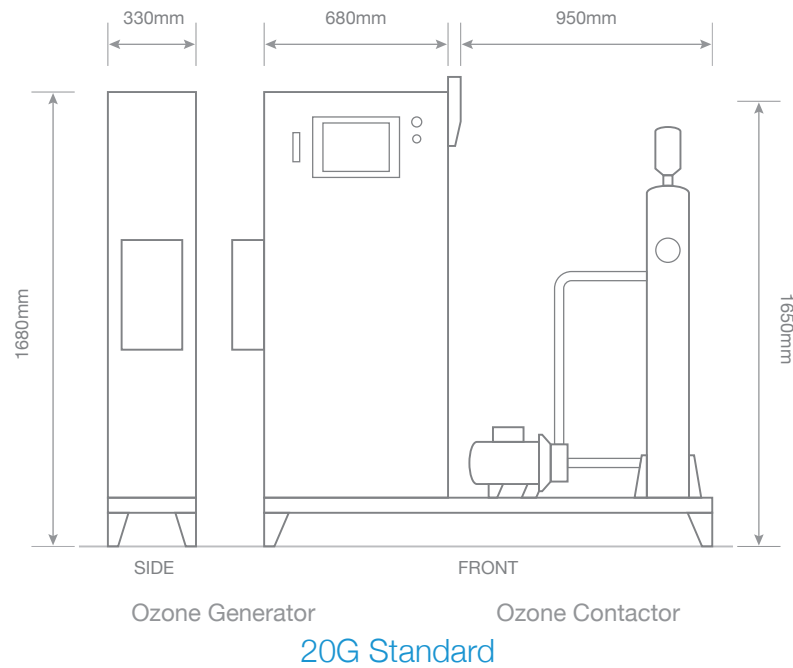
Cool

Most of our systems are installed in tropical countries with warm to hot climates and high levels of humidity. Systems are kept cool in order to work optimally under these conditions.

Dry

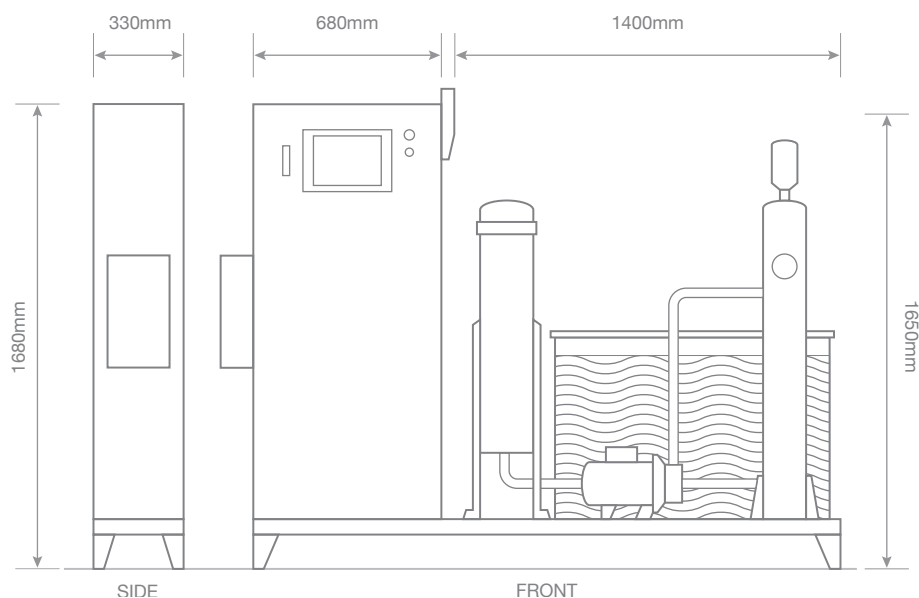
The air conditioning keeps the electronics dry - preventing damp and moisture, ensuring that the electronics are always working at their best.





Specifications

OZONE GENERATOR	20G Standard	20G Recycle (with recycling skid)
SIZE AND WEIGHT	Height: 1680mm (66.14 inches) Width: 680mm (26.77 inches) Depth: 330mm (12.99 inches) Weight: 60kg (132.28 pounds)	
POWER	380V - 50Hz - 2000W (max).	
ENCLOSURE	Laser cut 304 stainless steel IP42.	
OZONE OUTPUT	2 x (0 to 10 g/hr (grams per hour) ozone modules).	
PLC (PROGRAMMABLE LOGIC CONTROLLER)	Delta + analogue extension + PID controller.	
HMI (HUMAN / MACHINE INTERFACE)	Delta 10" full colour touchscreen.	
OXYGEN GENERATOR	Wassertec, max 5 L/min (Litres per minute) @ 90% purity.	
AIR FILTRATION	Festo MS6 5 micron and 0.01 micron.	
COOLING	Built-in Seifert Air Conditioner.	
DISSOLVED OZONE	Dissolved Ozone Measurement: Dr. Reiss GMBH ozone probe & flow-cell. Dissolved Ozone Control: 0.00 to 2.00 parts per million.	



Ozone Generator Ozone Contactor and Recycling Tank

20G Recycle

OZONE / WATER CONTACTOR	20G Standard	20G Recycle (with recycling skid)
SIZE AND WEIGHT	Height: 1650mm (64.96 inches) Width: 350mm (13.77 inches) Depth: 950mm (37.4 inches)	Height: 1650mm (64.96 inches) Width: 1200mm (67.25 inches) Depth: 1400mm (55.12 inches)
VOLUME	Ozone Contactor: 30 Litres	Ozone Contactor: 30 Litres Recycling Tank: 250 Litres
ENCLOSURE	304 stainless steel (316 optional).	
WATER PUMP	Ozone Dosing Pump: Ebara 0.75 kw stainless steel.	Water Transfer Pump: Ebara 1.1 kw Ozone Dosing Pump: Ebara 0.75 kw
WATER FILTER	-	Stainless Steel, 5 micron bag filter
VENTURI INJECTOR	Mazzei 684 Kynar (PVDF)	
DE-GAS VALVE	Armstrong fully ozone resistant.	
WATER INLET CONNECTION	NW32	
WATER OUTLET CONNECTION	NW25	

ON SITE REQUIREMENTS	20G Standard	20G Recycle (with recycling skid)
AMBIENT TEMPERATURE	45° C (113° F) Maximum.	
WATER TEMPERATURE	40° C (104° F) Maximum.	
POWER	220V - 20A Single phase circuit breaker.	
COMPRESSED AIR	85 L/min (Litres per minute) @ 2 Bar. Must be clean & dry.	



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