



**OWS Series** 

# Professional Ozone Laundry

**Hospitality | Healthcare | Laundromat** 

# **BigSure** professional

At BioSure Professional we produce ozone generation and integration equipment specifically for use in the professional laundry industry. We take our commitment to quality seriously and strive to continually improve our products in order to ensure we are providing the highest quality ozone laundry solutions available.

We are dedicated to providing our customers with complete solutions for their laundry needs through our cost-saving and ecologically-responsible units.

CE 🕲 SGS

\*Some features happen only with programmable washer-extractors.

## **Features**

- Compact, wall-mounted
- Flow triggering, automated operation
- Powered by iEOG, no need of air feed
- Consistent, independent to air quality
- Durable, major maintenance every 3 years
- Safe, with built-in destructor controlling off-gas
- Flexible, integration on multiple washers available
- Concentrated dosage enhancing sanitation contact
- Programmable dosing times available for different contamination demands

# **Application**







# **Advantages**

- Minimum maintenance
- No feed air preparation
- High concentration
- Consistent oxidation concentration
- Effective sanitation & deodorization

Laundromat

- Easily integrated to existing washers
- Low cost

# Installation

- OWS Series are designed to operate 24/7 in an extremely busy working environment.
- For laundromat application, depending on usage of washers and water flow, OWS Series could support multiple washers.



## **How It Works**



Generates high purity ozone directly from water  $(O_3 \text{ by } 28 \text{ wt\%}).$ 

Delivers ozonated water to washer extractor.

# **Dissolved vs. Bubble**

If you believe chlorine bleach in liquid solution is correct, why bother using more dangerous chlorine gas?

BioSure Professional's OWS Series provides instantly dissolved ozone solution rather than gaseous ozone as almost no one is applying gaseous chlorine in modern commercial laundry. Most washer manufacturers void their warranty if "bubble" system is applied.

Highly concentrated dissolved ozone solution delivers great wash result with no worries of ozone off-gasing unlike other technologies.

# Safe to Operate

#### OSHA guidelines for ozone off-gas

- 0.2 ppm for no more than 2 hours exposure
- 0.1 ppm for 8 hours per day exposure

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busy working environment.



Dissolved ozone kills bacteria, viruses and superbugs.



Oxygen opens fibers to promote cleaning and drying.





#### Sanitizes In All Cycles

Ozone is one of the most powerful disinfectants known to man and proven effective against all micro-organisms, bacteria, yeasts, moulds and viruses - including superbugs such as MRSA.

- BioSure Professional kills 99.999% of harmful bacteria on all wash cycles.
- Eliminates odor for the washer extractor.



#### **Enhances Chemical Performance**

Because ozone allows existing chemicals to work better, overall chemical demand can be reduced, especially to the need for harsh and high-pH chemicals in conventional washing processes.



## **Improves Washing Results**

Ozone in water solution performs oxidation to linen soils and destroys odor-causing elements. Also, the oxygen from ozone penetrates and opens up the fibers. Thus:

- Recovering linen softness.
- Refreshing smells.





#### **Shorter Drying Times**

Because fibers are opened, moisture release becomes easier in the dryers or on a flatwork ironer. Thus:

- Creating much faster drying times.
- Reduce energy use in drying.



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## **Reduces Water & Energy Use**

Dissolved ozone supplies oxygen to the wash water, enhancing chemical effectiveness. Thus:

- Fewer rinse steps required or shorter wash cycles.
- Less need for water heating.



#### **Improves Effluent Quality**

Due to fewer chemicals are used and also the oxidation of ozone in the wash water, both biochemical and chemical oxygen demands (BOD & COD) in the wastewater will be greatly reduced.

#### **Deodorization**

Ozone is an effective deodorizer that works by oxidizing and breaking molecular bonds of many organic and in inorganic compounds typically responsible for odors that are found in washer-extractor and on soiled laundry.

#### **Improves Textile Life & Quality**

Shorter cycles or washing times and cooler temperature water means less wear and tear on linens. Also, reduced exposure to harsh chemicals improves fabric life.

#### **Results & Performance**

SGS	BioSure Professional Ozonated Water Efficacy Test						
	Test Item		0 sec	5 sec	15 sec	Reduction (%)	
Antimicrobial Eciency Test	Staphylococcus aureus	(CFU/ml)	5.4 x 10⁵	Not detected	Not detected	> 99.999	
	Escherichia Coli	(CFU/ml)	3.4 x 10 <sup>5</sup>	Not detected	Not detected	> 99.999	
	Salmonella	(CFU/ml)	1.1 x 10 <sup>5</sup>	1.0 x 10	Not detected	> 99.999	
	Pseudomonas aeruginosa	(CFU/ml)	4.5 x 10⁵	Not detected	Not detected	> 99.999	
	Candida albicans	(CFU/ml)	1.3 x 10⁵	Not detected	Not detected	> 99.999	
	MRSA	(CFU/ml)	2.4 x 10 <sup>5</sup>	Not detected	Not detected	> 99.999	

#### **Technology Comparison**

BioSure Professional's patented Indirect Electrolytic Ozone Generation (iEOG) technology is the world's leading technology for ozone generation. It is an unique technology which produces ozone from water instead of gaseous air or oxygen. No other substance besides water is used in the electrolysis and only pure ozone with no Nitrogen Oxides (NOx) will be produced. The technology has proven to fulfill the demand within professional environment for providing a reliable and consistent performance with minimal maintenance required as most others do not.

#### iEOG Technology

#### No need of feed air handling

Performance is independent to humidity and air quality (lint in air).

#### No by-product, NOx-free

No NOx hazards, no acidification and associated corrosion in contact with equipment or materials.

#### Promoted Ozone Purity - up to 28wt%

Higher ozone purity means higher efficiency. iEOG delivers 6 to 10 times better dissolution efficiency than ordinary Corona Discharge system.

#### Consistant performance

For ozone generated from water electrochemically the production is consistent and independent to environmental variables.

#### Reliable operation

Full time self-monitoring, real-time collective alarm and service codes are available.

#### **Conventional Corona Discharge**

Performance is highly dependent to humidity and air quality (lint in air). Feed air preparation is required (air filters, air dehumidifier or oxygen concentrator), meaning frequent maintenance needs.

NOx production in corona discharge represents a health hazard and potential lead to corrosion.

About only 1-3wt% of ozone is produced in corona discharge ozone system without air pre-treatment. More nitrogen is dissolved in water and very little ozone can be dissolved.

Inconsistent performance fluctuation can happen in daily opertaion due to air quality variables, especially lint and humidity. Frequent daily and weekly check up is required for on-site service engineers.

Self-monitoring is not available leading to potential blind operation.

## **Specifications**

#### Washer-extractors:



- 2ppm for disinfection-focus application

CLS30		
	>1.0ppm	
	900LPH (3.96GPM)	
ospitality	20 lbs x 2 unit / 35 lbs x 1 unit	
aundromat	In totel 60 lbs combination	
ealthcare	20 - 35 lbs x 1 unit	
oltage	100 - 120V, 50/60Hz or 200 - 240V, 50/60 Hz	
ower Consumption	60W	
imension (mm)	300 x 169 x 431 (mm)	
et Weight	7.5kg (15.5lbs)	
	1/2""	

	OWS-1			
	>1.0ppm			
	4000LPH (17.6GPM)			
ospitality	60 lbs x 2 unit / 120 lbs x 1 unit			
aundromat	In totel 120 lbs combination			
ealthcare	60 lbs x 1 unit			
oltage	100 - 120V, 50/60Hz or 200 - 240V, 50/60 Hz			
ower Consumption	900W			
imension (mm)	550 x 310 x 650 (mm)			
et Weight	60kg (132lbs)			
	1 1⁄2""			

OWS-3		
Conc.	>1.0ppm	
	6000LPH (26.4GPM)	
ospitality	120 lbs x 2 unit / 250lbs unit x 1	
undromat	In totel 250 lbs combination	
ealthcare	120 lbs x 1 unit	
Itage	100 - 120V, 50/60Hz or 200 - 240V, 50/60 Hz	
wer Consumption	1150W	
mension (mm)	1000 x 350 x 760 (mm)	
et Weight	85kg (290lbs)	
	1 1⁄2""	

#### **Tunnel Washers:**

	Model No.	G3	G6	G9	
	Ozone Production	3 g/h	6 g/h	9 g/h	
	Voltage	100 - 120V, 50/60Hz or 200 - 240V, 50/60 Hz			
	Power Consumption	300W	600W	900W	
	Dimension (mm)	420 x 1044 x 900 (mm)			
G Series	Net Weight	54kg (119lbs)	60kg (132lbs)	65kg (144lbs)	
	Input/Output Diameter	3/8"			

For tunnel washer application, please contact our sales agents.

# Sanitized & Fresher Smelling TRUE CLEAN

# Cleaner, Softer & longer lasting linen

# **REAL SAVINGS**

#### About Us

Since 1988, BES Group is the global leader in electrolytic technology. Coverting water to ultra pure ozone gas and hydrogen gas is our core technology. Series products included in Food Safety & Sanitation, Healthy Environment, Clean Water, and Sanitation & Wellness. All products and components are tested for high performance, safety, and reliability with required certifications from goverment agencies and leading 3rd party labs.



Technologies applied in this product are protected by one or more of the following patents: US 8,308,914 B2, US 9,757,697 B2, US 9,248,208 B2



DUP ISO 9001 & ISO 13485 certified

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