JIMCO®
UV-C & OZONE
Technology

#chemicalfreeworld

DOCUMENTED EFFECT

EST. 1992

CHEMICAL-FREE SURFACE DISINFECTION

FLO-D® TECHNOLOGY

US Patent No. 14/436,318 PCT/EP 2012/070820

MADE IN DENMARK

JIMCO.DK

INNOVATION AND DEDICATION

DESIGNED AND DEVELOPED IN DENMARK

JIMCO A/S: Pioneers in Air Purification and Disinfection

Since launching our first air purification unit in 1992, JIMCO A/S has been at the forefront of advanced, environmentally friendly solutions for air purification and disinfection.

Over the years, JIMCO A/S has expanded its reach and now supplies its products to a wide range of industries and institutions worldwide.

COMPLETE SURFACE DISINFECTION IN PRODUCTION FACILITIES.

WHY CHOOSE JIMCO'S DISINFECTION TECHNOLOGY?

- ✓ Avoid manual disinfection using water and chemicals
- ✓ Save significant amounts of water and energy normally used for heating, drying and wastewater treatment
- ✓ Effective disinfection in hard-to-reach areas such as corners, cracks, ventilation ducts, cooling surfaces, equipment surfaces, floor drains and technical installations
- ✓ Avoid the use of harsh chemicals that negatively impact the environment and working environment
- ✓ Reduce CO_2 emissions and avoid discharge of chlorine-containing wastewater

Regardless of the size of the project, JIMCO A/S has a solution.

The company is known for combining practical thinking with innovation, resulting in solutions delivered to some of the world's leading food industries.

Effective disinfection – without manual procedures, chemicals or water.

JIMCO introduces UV-C and ozone surface disinfection, also known as FLO-D®, which stands for Photolytic Oxidation Disinfection. This solution is a further application of JIMCO's award-winning UV-C technology, which received the EU Environmental Award in 2000 and has been used since 1992 in air purification systems. These systems have helped eliminate unpleasant odours and improve both outdoor and indoor environments.

JIMCO FLO-D® enables surface disinfection without manual handling, providing a range of benefits in terms of economy, safety, environment and working conditions.

FACT: -Ozone naturally converts into oxygen, ensuring an environmentally friendly treatment without harmful residues.

FLEXIBLE DISINFECTION FOR PROFESSIONAL ENVIRONMENTS

FLO-D® is developed for use in production and processing environments where high standards for hygiene, safety and documentation are required. The solution can be used across a wide range of industries and applications where traditional manual cleaning may be time-consuming or insufficient.

Food Production:
- Automated and consistent disinfection in production areas with high hygiene requirements
- Helps reduce the risk of cross-contamination and supports food safety

Fish & Seafood:
- Effective disinfection in environments with high humidity and low temperatures
- Suitable for production facilities, cold storage areas and packaging areas

Meat Processing Facilities:
- Disinfection of hard-to-reach surfaces, technical installations and production zones
- Suitable for areas where bacterial contamination is critical

DISINFECTION WHERE THE RISK IS HIGHEST

In addition to production areas themselves, FLO-D® is well suited for disinfecting zones and rooms that are often overlooked during daily cleaning – yet play an important role in overall hygiene.

- **Packaging Areas:**
  Helps reduce the microbiological load in zones where products are packed and handled before distribution
- **Storage & Cold Rooms:**
  Supports disinfection in cold rooms and storage areas, where low temperatures and high activity may increase the risk of bacterial growth
- **Transport and Logistics:**
  Suitable for disinfection of transport zones, containers and areas between production and delivery
- **Technical Installations:**
  Disinfection of surfaces, ventilation components, cable trays, floor drains and other hard-to-reach areas

Focus on areas that are often overlooked during daily cleaning

For example floor drains, joints and other hard-to-reach surfaces with high hygiene requirements.

DISCOVER THE POWER OF FLO-D®

FOR EFFECTIVE AND CHEMICAL-FREE DISINFECTION

Here are some of the benefits of using a FLO-D® unit:

FLO-D® stands for: Photolytic Oxidation Disinfection

✓**Effective disinfection:**
FLO-D® uses a combination of UV-C technology and ozone to eliminate bacteria, viruses, mould and other harmful microorganisms. The effective disinfection process creates a cleaner, healthier and safer environment. Areas exposed to the treatment can be disinfected, including ventilation systems, floor drains, cable trays and more.

✓**Environmentally friendly solution:**
FLO-D®'s eliminates the need for water and chemicals. This makes it an environmentally friendly solution, as it does not generate chemically emulsified wastewater.

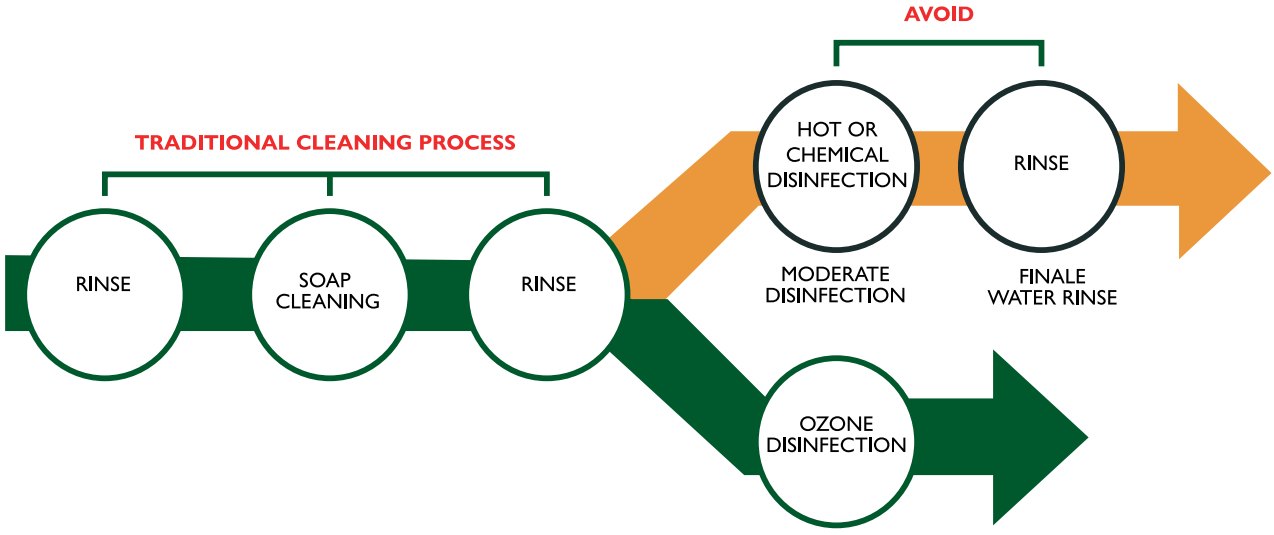
✓**No chemical impact:**
By avoiding the use of chemicals in the disinfection process, FLO-D® reduces the risk of contamination of food products, surfaces and the environment.

✓**Cost savings:**
By eliminating the need to purchase or store chemicals for disinfection, economic savings can be achieved. FLO-D®'s effective disinfection system also helps reduce costs related to cleaning procedures, maintenance, water heating and wastewater treatment while reducing labour requirements.

✓**Easy to use:**
FLO-D® units are designed to be user-friendly. They are easy to operate and can be adapted to specific needs and requirements. With the intuitive touchscreen, treatment parameters can easily be configured and monitored.

✓**Flexible application:**
FLO-D® units can be used across a wide range of applications and industries, including food production, transport and the healthcare sector. The units can be adapted to different room sizes and environments.

GUARANTEED RESULTS
OR EFFECTIVE DISINFECTION & DATA LOGGING



FLO-D® MINI MARK 2

TECHNICAL SPECIFICATIONS

UV-C lamps: 8 8 pcs., 70 W
Quartz tubes: 8 pcs. (used in cold rooms below 15°C)
Power supply EU: 1×230 V + PE, 50/60 Hz, 10 A
Power supply US: 1×115 V + PE, 50/60 Hz, 10
Power consumption EU: 650 W
Power consumption US: 747 W
Display: Pro-face PLC, colour touchscreen
Room volume – Disinfection: Up to 315 m^3 per unit

Dimensions:
Height: 1150 mm
Width: 560 mm
Depth: 890 mm
Weight: 59 Kg

Integrated - temperature and humidity sensor; ozone monitor and access point
Patented data logging system for documentation

US Patent No. 14/436,318
PCT/EP 2012/070820

SPECIFICATIONS

2.

1. **Touchscreen**
   Configure the treatment settings and enter a digital signature

2. **Connection**
   For smartphone or tablet

3. **USB port**
   Document the treatment using data logging

4. **Ethernet Port**
   For cloud connection and data logging

5. **Cable**
   5 or 10 meters

6. **Speaker**

7. **Ozone Monitoring Unit**
   (OMS)

8. **Power Supply**
   Supplied with a 5-metre cable

9. **Temperature and Humidity Sensor**
   Located at the bottom

10. **Antenna**
    Local access via tablet/mobile device
    Range up to 40 metres
    (Remote monitoring via PC available)

11. **Alarm**
    Audible siren alarm

12. **LED light**
    Machine status indicated by coloured signal lights

13. **Nameplate**

14. **Connector for Ozone Monitoring Unit**
    OMS

15. **Input Signal**
    For external door contacts for start/stop and evacuation

FLO-D® MAXI

TECHNICAL SPECIFICATIONS

UV-C lamps: 30 pcs., 89 W
Quartz tubes: 30 pcs. (used in cold rooms below 15°C)
Power supply: 3x400V + PE 50/60Hz, 16A
Power supply US: AC 3X480V 60 Hz
Power consumption EU: 4,15 kW

Display: Pro-face touchscreen
Room volume: up to 1,000 m^3 per unit

Dimensions:
Height: 1.800 mm
Width: : 1.150 mm
Depth: 1.150 mm
Weight 275 Kg

Connection for evacuation fan, door contacts and motion sensors

Option for monitoring positive and negative pressure

Includes Ozone Monitoring Unit (OMS)

US Patent No. 14/436,318 PCT/EP 2012/070820

CLOUD-BASED MONITORING AND DATA LOGGING ARE STANDARD IN THE FLO-D® MAXI MODEL

SPECIFICATIONS

Power On	Below Ozone Threshold	No Access	System Fault
			

1. Touchscreen Configuration of treatment settings and entry of an individual signature	5. Cable 5 or 10 Meters	9. Temperature and Humidity Sensor
2. Connection Connection to smartphone or tablet	6. Speaker	10. Safety Switch
3. USB-port Documentation of treatment via data logging	7. Ozone Monitoring Unit (OMS)	11. Antenna Local access via tablet/mobile device. Range up to 40 metres (remote monitoring via PC available)
4. Ethernet-port	8. Power Supply Supplied with a 5-metre cable	12. Alarm Machine status is indicated via coloured signal lights and supplemented by an audible alarm (siren).

FLO-D FIXED®

FLO-D® Fixed is a stationary disinfection solution designed for permanent installation in production and processing environments.

The solution is particularly suitable for rooms and zones with fixed hygiene requirements where automated, chemical-free surface disinfection without manual handling is required.

TECHNICAL SPECIFICATIONS

UV-C lamps: 15 pcs., 165 W
Quartz tubes: 15 pcs. (used in cold rooms below 15°C)
Power supply EU: 3×400 V + PE, 50/60 Hz, 16 A
Power supply US: 3×480 V + PE, 50/60 Hz, 16 A
Power consumption EU: 3 kW
Display: Siemens touchscreen
Room volume: up to 1,000 m^3 per unit

Dimensions

Height:	413 mm
Width:	1,866 mm
Depth:	1,216 mm
Weight:	160 kg

User-friendly Siemens touchscreen for control and monitoring


EXAMPLE OF CEILING INSTALLATION

SCALABLE SOLUTION – NO SIZE LIMITATIONS

FLO-D FIXED® CAN BE ADAPTED FOR EVERYTHING FROM INDIVIDUAL AREAS TO LARGE PRODUCTION FACILITIES.

CONTROLLED AND SAFE DISINFECTION IN PRODUCTION AND PROCESSING ENVIRONMENTS

FLO-D® is developed for use in professional production and processing environments where safety, control and documentation are essential.
The system is designed with built-in safety functions ensuring that disinfection is only carried out under controlled conditions and in compliance with applicable hygiene requirements.

Part of the company's hygiene programme

FLO-D® is suitable for integration into existing hygiene, self-monitoring and quality programmes where safety, traceability and documentation are required.

Automated Process Control

The disinfection process is automatically controlled and can be adapted to individual rooms and specific applications.

Critical parameters are continuously monitored to ensure stable and consistent treatment.

- Monitoring of temperature and humidity
- Monitoring of ozone levels
- Integration with ventilation systems
- Alarms and status indicators
- Monitoring of pressure conditions *(positive/negative pressure)*
- Visual and audible alarm in case of deviations
- Clear status indication via signal lights and display

Built-in Safety Logic

FLO-D® is a standalone unit that can be connected to external signals and installations as part of the company's safety and hygiene procedures.

- Connection to door contacts and motion sensors
- Integration with evacuation ventilation
- Automatic stop in case of unauthorised access
- Monitoring of ozone levels during operation

These functions ensure that disinfection is only performed when the room is properly secured and unoccupied.

The solution contributes to:

- Stable operation and increased process control
- Consistent and documented disinfection
- Reduced risk of human error
- Improved working environment with reduced use of chemicals

MONITOR YOUR DISINFECTION PROCESS

With Ease via a Cloud Solution

With JIMCO's FLO-D® solution, you can monitor the operation of your disinfection system directly via the cloud. This provides full visibility of fixed installations and ensures continuous control – wherever you are located. The solution offers a range of valuable benefits for the food industry.

Benefits of Cloud-Based Monitoring:

1. **Continuous Monitoring:** Monitor your FLO-D® system in real time and gain immediate access to important data and statistics. This helps ensure that disinfection is carried out as planned.

2. **Efficient Troubleshooting:** Cloud-based monitoring enables quick identification and handling of operational issues or faults, reducing downtime and production interruptions..

3. **Data Insights:** Gain insight into system performance over time through historical data.
This can help optimise operational processes and improve disinfection procedures.

4. **Remote Access:** Monitor your FLO-D® system from anywhere and at any time with internet access, providing flexibility and convenience.

5. **Multi-Site Monitoring:** Cloud-based monitoring allows you to monitor multiple factories and installations from one centralised platform. This makes it easy to compare performance across locations and implement consistent disinfection strategies across the entire organisation.

PRECISE DATA LOGGING

Your Reliable Documentation

FLO-D® provides comprehensive data logging functionality, enabling you to monitor your disinfection process and collect important documentation. This is not only a practical feature but also essential within the food industry.

	A	B	C	D	E	F	G
1		date (UTC)	O3Level	O3Setpoint	Fanspeed	Temperature	Humidity
2		14-05-2026 20:56	0.1	8	100%	25	95,6
3		14-05-2026 20:57	0.1	8	100%	25	95,6
4		14-05-2026 20:58	0.2	8	100%	25	95,6
5		14-05-2026 20:59	0.4	8	100%	25	95,6
6		14-05-2026 21:00	0.7	8	100%	25	95,6
7		14-05-2026 21:01	0.8	8	100%	25	95,5
8		14-05-2026 21:02	1.2	8	100%	25	95,5
9		14-05-2026 21:03	1.3	8	100%	25	95,6
10		14-05-2026 21:04	1.6	8	100%	25	95,6
11		14-05-2026 21:05	2	8	100%	25	95,6
12		14-05-2026 21:06	2.1	8	100%	25	95,6
13		14-05-2026 21:07	2.5	8		25	95,6
14		14-05-2026 21:08	2.8	8			95,6

Why Is Data Logging Important?

1. **Documentation:** Data logging provides a detailed record of all activities carried out during the disinfection process. This serves as documentation that can be used for inspections, audits and quality control.

2. **Troubleshooting:** If challenges or issues occur during the disinfection process, the data log can be used to identify and resolve problems. This helps minimise production downtime and quality issues.

3. **Optimisation:** By analysing the data log, you can optimise your disinfection process over time. Identify patterns, trends and opportunities for improvement that can lead to more efficient procedures.

4. **Quality Assurance:** Data logging forms an important part of quality assurance. It confirms that your disinfection processes have been carried out correctly and comply with required standards.

With our reliable data logging functionality, you can have full confidence that your disinfection process is accurate and documented at all times. It is your assurance of quality and compliance with regulations and standards within the food industry.

ECONOMY / BENEFITS

- Reduced need for chemicals and handling
- Reduced need for manual cleaning and labour
- Can contribute to reduced water consumption related to cleaning
- Can contribute to reduced downtime and production losses
- Lower consumption of cleaning resources
- Minimal maintenance and fewer service intervals
- Reduced strain on installations and equipment
- Can contribute to fewer quality deviations and reduced product loss
- Stable and consistent disinfection process

ROI

In food production, investments are not only about purchase price – but also about stable operation, documentation and long-term value. FLO-D® is developed to support a more consistent and automated disinfection process that can contribute to reduced resource consumption, downtime and operating costs.

Here are some of the economic benefits of using FLO-D® in food production:

Economic Saving: Traditional disinfection methods may involve ongoing costs related to chemicals, manual labour and operation. With FLO-D®, the need for chemicals can be reduced, while the automated process may contribute to savings in labour, cleaning resources and daily operations. Disinfection without manual handling may also help reduce the need for planned downtime.

Short Payback Period: Investment in a FLO-D® system typically pays back within the first years.
Overall savings in operation, resources and handling contribute to the bottom line.

Minimal Maintenance: FLO-D® is designed for minimal maintenance and fewer service intervals compared to traditional methods. This may lead to lower expenses for spare parts and technical support while reducing strain on installations.

Future Savings: Beyond immediate economic benefits, FLO-D® is a long-term investment.
A more consistent and controlled disinfection process can help reduce the risk of quality deviations and waste, supporting stable operation over time.

In summary, FLO-D® is not only a hygiene solution, but also an economically attractive investment for food producers and others with disinfection needs. Fast payback and continued savings make it an investment with long-term value and increased profitability.

BACTERICIDAL EFFECTIVENESS

University of Southern Denmark

Listeria monocytogenes (CFU-reduktion)

Exposure time	Ozone concentration	Loaded CFU/cm²	Control CFU/cm²	Ozone CFU/cm²	Reduction
2 hour	10 ppm	2,40E+03 (2400)	4,00E+00 (4)	0,00E+00 (0)	
		3,30E+03 (3300)	8,00E+00 (8)	0,00E+00 (0)	
		3,00E+03 (3000)	7,00E+00 (7)	0,00E+00 (0)	
	Average	**2,90E+03 (2900)**	1,60E+01 (16)	0,00E+00 (0)	
			8,75E+00 (8,75)	**0,00E+00 (0)**	**100,00%**
2 hour	10 ppm	2,00E+04 (20.000)	3,00E+00 (3)	0,00E+00 (0)	
		2,00E+04 (20.000)	1,40E+01 (14)	0,00E+00 (0)	
		2,00E+04 (20.000)	2,80E+01 (28)	0,00E+00 (0)	
	Average	**2,00E+04 (20.000)**	**1,50E+01 (15)**	**0,00E+00 (0)**	**100,00%**
2 hour	10 ppm	3,60E+04 (36.000)	3,00E+01 (30)	0,00E+00 (0)	
		2,20E+04 (22.000)	1,13E+02 (113)	0,00E+00 (0)	
		2,60E+04 (26.000)	3,40E+01 (34)	0,00E+00 (0)	
	Average	**2,80E+04 (28.000)**	**5,90E+01 (59)**	**0,00E+00 (0)**	**100,00%**
2 hour	10 ppm	3,60E+05 (360.000)	3,98E+02 (398)	0,00E+00 (0)	
		2,20E+05 (220.000)	2,85E+02 (285)	1,00E+00 (1)	
		2,60E+05 (260.000)	2,97E+02 (297)	0,00E+00 (0)	
	Average	**2,80E+05 (280.000)**	**3,27E+02 (327)**	**3,33E-01 (0,33)**	**99,90%**

DOCUMENTED EFFECT

Test Organisms	2h		3h		4h	
	Control	Test	Control	Test	Control	Test
	Cfu/plate					
Escherichia coli 8739	27	1	30	<1	11	<1
Staphylococcus aureus 6538	>200	<1	>200	<1	>200	<1
Pseudomonas aeruginosa 9027	11	<1	6	1	9	1
Streptococcus faecalis 5129	>200	<1	>200	<1	>200	<1
Enterobacter aerogenes 13048	51	<1	44	<1	40	<1
Listeria monocytogenes	146	<1	194	<1	165	<1
Lactobacillus plantarum 14917	120	<1	35	<1	39	<1
Salmonella typhimurium 14028	146	<1	133	<1	184	<1
Saccharamyces cerevisia 2601	152	<1	94	<1	184	<1

DOCUMENTED EFFECT OF FLO-D® AGAINST MICROORGANISMS

JIMCO®

UV-C & OZONE
Technology

UV-C AND OZONE SOLUTIONS FOR THE FUTURE

EUROPE · SOUTH AMERICA · NORTH AMERICA · AFRICA · ASIA · MIDDLE EAST

JIMCO TECHNOLOGY REFERENCES

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