

ELECTRONIC SPRAY HEAD FOR AIRBORNE DISINFECTION



**Product Range
2024/2025**

MICRONICE©

P&S T45 / P&S 360

Tekceleo's Micronice vibrating Mesh technology provide a unique dry fogging technology **that allows modularity and performances for airborne disinfection of volumes or equipments.**

Our airborne disinfection range **is specifically made only in stainless steel and HDPE components for very long lifespan.** With its very little footprint, its "plug and play" and modular design, our technology is very **well suited for direct integration in equipment or disinfection devices.**

Our capacity to adapt the droplet size, a smooth nebulization (no pressure nor heating) and a very precise control of the flowrate allow our customer to easily integrate our nozzle to each of their specific situation and environment.



COMPACT



EFFICIENT



RESISTANT



SIMPLE

- ✓ **Very smooth nebulization, without inertia, heat or pressure.** Allows disinfection of very small and sealed volume (<100L).
- ✓ **Full electronic control, plug and play** on AC power supply, adaptable flowrate.
- ✓ **Low footprint** : 20mmx46mm.
- ✓ **Material savings** : no dead volume.
- ✓ **Very low electrical consumption (<2W), can work on battery.**
- ✓ **Quiet operation (<35dB).**

How it works ?

Bring liquid to the nozzle to atomize. Operation controllable with a simple PCB (up to 10 nozzles simultaneously).

Droplet size	Max Flowrate (ml/min)	Max Flowrate (L/h)
05 µm	0,8 ml/min	0,05 L/h
08 µm	2,5 ml/min	0,15 L/h
12 µm	5,5 ml/min	0,33 L/h
20 µm	8 ml/min	0,48 L/h
50 µm	35 ml/min	2,1 L/h

***Other droplet sizes available on demand**

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∅ 20



PROTECTIVE CAP

*HDPE
Stainless Steel
Easy Mounting tight-fitted or
gasket method*



VIBRATING MESH

*Stainless Steel
5 standard droplet size
Custom-made nozzle*

**PIEZO
TRANSDUCER**

*Very low power
consumption (<4W)
No noise
No heating nor pressure
rise*



FLUIDIC SYSTEM

*Adaptable flowrate
Closed loop operation or with
drains
To avoid clogging*



HDPE BODY

*Support corrosive liquid
Support high temperature of
operation (-20° to 80° C)*

Discover the cutting-edge technology of Tekceleo's **modular automated decontamination nozzles**. Our team of experts is dedicated to providing innovative solutions with advanced motion and aerosol generation technologies to **achieve your goals more efficiently and accurately**.

Our solutions are designed to **improve productivity, efficiency, and reliability**, ensuring that you can achieve your objectives with confidence.

Bring decontamination to the edge



Airlock

This technology is highly effective at killing viruses, bacteria, spores and other pathogens, making it an ideal solution for medical facilities, laboratories, and other settings where cleanliness is critical. **It has been proved to achieve EN 17-272 norm for airborne disinfection.**

Our H2O2 nozzles are also electronically control, which means easy to plug to your PLC (PWM control method).

Precision technology is essential for effective decontamination, and Tekceleo's modular nozzle delivers just that. Our innovative solutions use aerosolized H₂O₂ (hydrogen peroxide) for automated decontamination, with a focus on precision and efficiency.

Our modular nozzle allows for **easy and efficient decontamination, even in small or hard-to-reach areas**. With our technology you can easily bring automated decontamination to your equipment.

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Isolators

MICRONICE®

P&S T45 / P&S 360

Our technology is suitable for multiple sterilization and decontamination use cases : **it works both with Hydrogen Peroxide and Peracetic Acid, using cold-temperature nebulization.** Our nozzles are made to be easily integrated in all equipment, regardless of the sector. **In the right configuration they achieve the EN 17-272 norm for airborne disinfection, which means reaching log 4 to 6 for bacteria, viruses and fungi.**

Right now, our technology is integrated in many automated decontamination devices such as :

- **Portable automated H2O2** (hydrogen peroxide) **decontamination foggers** ;
- **Isolators**, as integrated hydrogen peroxide sprayers ;
- **Biological Safety Cabinet** (BSC), as integrated hydrogen peroxide sprayers ;
- **Airlock**, as integrated hydrogen peroxide foggers ;
- **Aseptic packaging machine for food industries**, as integrated hydrogen peroxide foggers.



Biological Safety Cabinet

Our technology is very appreciated in **H2O2 decontamination for small or medium sized volume.** Indeed, our ability to produce very small droplets (05 µm) allows for same efficiency as VHP (vaporized hydrogen peroxide) devices but without the disadvantages. Indeed, our system remains small, easy to integrate and allows for short decontamination cycles (between 15mn to 1h).

Main characteristics :

- Dimension : 20mmx46mm
- **Very high chemical compatibility with all biocides** (stainless steel and HDPE only).
- Energy Consumption : 2W
- Quiet operation (<35dB)
- Very low response time (<1ms)
- Operation for liquid below 3 cp viscosity
- Adaptable flowrate : possibility of very low volume atomization (<0,01ml/mn) to large volume (>5 L/h) depending on the configuration

Liquid Tested	Resistance	Lifespan
H ₂ O ₂ - 10%	Excellent	> 5000 hours
H ₂ O ₂ - 30%	Excellent	> 5000 hours
H ₂ O ₂ - 10% C ₂ H ₄ O ₃ - 1%	Excellent	> 5000 hours
HCLO - 0,1%	Very Good	> 3000 hours

Features and advantages of Micronice for airborne disinfection

Main problem	Micronice feature to solve it	Micronice advantages
High time consuming disinfection process	Dry and cold nebulization process , without heat or pressure. Dramatically reduces aeration time to acceptable H2O2 levels. On small volumes Micronice allows to reduce a cycle to 15min, compared to 1h30 with VHP.	Compared to other cold nebulization device, Micronice technology does not use pressure and is natively electronically controlled. It implies that it can be also used for very small volume or to be integrated in small places.
High consumption of consumables	Precise flowrate control allows to exactly use the amount of biocide needed.	The electronic control of flowrate and operation cycle with a very quick latency (< 1ms) allows to save a lot of biocide over time.
High maintenance cost	HDPE and stainless steel only, all active parts are separated from the corrosive liquids. Low power and robust electronics.	All components are compatibles to corrosive and oxidant disinfection liquids. Moreover, our low powered amplified technology is very robust.
Equipment too large for small volumes	Very compact : 20mm x 40 mm nozzle, no need for compressor or large equipments to run..	The high efficiency of our technology makes it very small and compact without sacrificing lifespan and robustness.
Integration difficulties that increase the complexity of industrial processes	Easy to integrate : compact plug and play nozzles and electronics. Control possible via PWM in order to run the nebulization function via your own industrial equipment.	Because it does not imply heating or pressure, in order to work in any environment our technology only need a power supply and a low power pump to bring biocide in the nozzle.

Possible configurations

Volume to disinfect	Required flowrate	M05	M08	M12	M20	Fan needed	Electronic control	Power range
0 to 0,1 m3	<2ml/min	2 u	1 u	1 u	N/A	No	Yes	1,5 - 3W
0,1 to 1 m3	~4ml/min	4 u	2 u	1 u	N/A	No	Yes	1,5 - 6W
1 m3 to 5m3	~8ml/min	10 u	4 u	2 u	1 u	Yes	Yes	1,5 - 15W
5 to 40 m3	~12ml/min	N/A	5 u	3 u	2 u	Yes	Yes	3 - 8W
40 to 200 m3	~20ml/min	N/A	10 u	5 u	2 u	Yes	Yes	10 - 20W
200 to 800 m3	~50ml/min	N/A	N/A	15 u	5 u	Yes	Yes	10 - 30W