

# ULTRAVISION2

See your smoke  
management problems disappear

New!

Effective **Smoke Management** Slimline,  
**Easy To Use**, Silent, **No Distractions**  
Environmentally **Friendly**

Ultravision2 IonPencil™

Ultravision2 Generator



# Why Choose Ultravision For Open Surgery?

Ultravision2™ provides advanced smoke management for OR staff with the new IonPencil for use in open surgery.

The IonPencil suppresses aerosolization of the surgical smoke at the source, minimizing its release into the operating room. The slimline ergonomic design provides an unshrouded electrode tip, enabling excellent operative site access, and the lack of tubing ensures minimal torque and drag.

The silent Ultravision2 generator helps ensure OR staff can concentrate on the patient, with minimal distractions. The efficient design also improves sustainability with reduced packaging, reduced single use plastics, reduced energy consumption, and no disposable filters.



## The IonPencil

The IonPencil has been developed to provide excellent smoke management performance but without any of the bulk associated with conventional "smoke pencils" that can compromise surgical performance.

- A - Slimline handle.
- B - No tubing.
- C - Reduced weight compared to smoke pencil.
- D - Unshrouded electrode tip.
- E - Easy to handle, greater tissue access.

## Key features & benefits



Lightweight ergonomic  
'slimline design'  
Easy to handle,  
greater tissue access



Silent in  
operation  
Less distraction,  
more focus



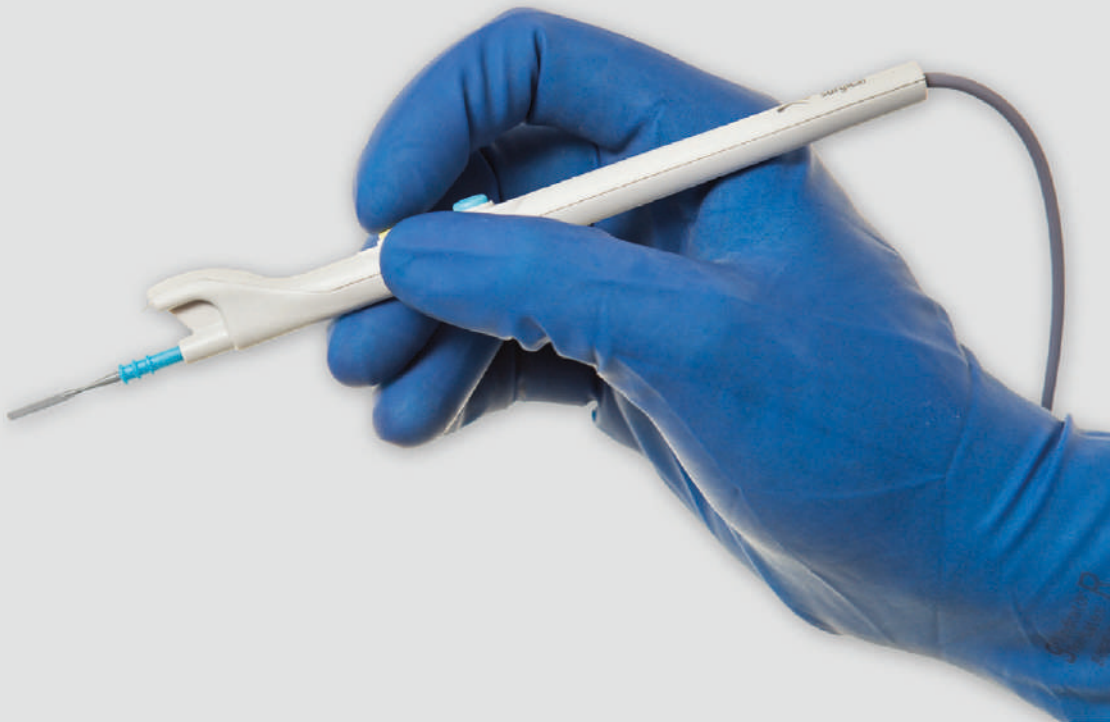
Efficient smoke  
management  
Reduced exposure to  
potentially hazardous  
surgical smoke



Reduced waste  
versus smoke pencil  
No disposable  
filters, less  
packaging, less  
single use plastic

## Ultravision Performance Comparison...

	IonPencil	Telescopic Smoke Pencil	Non-Telescopic Smoke Pencil
Best-in-class operative site access	●	◐	◐
High maneuverability	●	◐	◐
Silent in operation	●	◐	◐
High energy efficiency	●	◐	◐
Low environmental impact	●	◐	◐

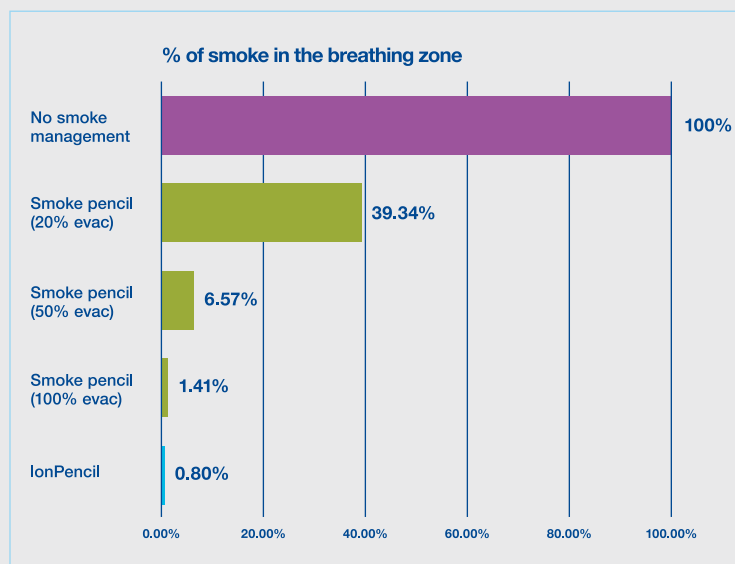


## IonPencil delivers excellent smoke management performance

Smoke management performance was assessed in simulated testing against a representative smoke pencil. The IonPencil demonstrated consistent and excellent performance in suppressing smoke released into the atmosphere, whereas the smoke pencil performance was highly dependent upon the vacuum setting of the smoke evacuator\*.

In simulated surgery to assess volatile organic chemicals (VOCs), even without room ventilation, only five of 64 VOCs assessed were elevated in room air samples when using the IonPencil. Quantifying these five VOCs confirmed a large margin of safety for both fifteen-minute, short-term (STEL) and eight-hour daily average (TWA) exposure limits\*\*.

\* Source: Alesi Surgical report MCR-007-3 Rev 1  
 \*\* Using the Environmental Protection Agency (EPA) TO-15 test method, margins of safety ranges were STEL: 26-28,000; TWA: 17-75,000.  
 Source – Alesi Surgical report DVER-007-012 Rev 1.



# ULTRAVISION2

Solving surgical smoke problems  
in *laparoscopic* and *robotic surgery*

Smoke **Management**  
Enhanced **Visualization**  
Stable **Pneumoperitoneum**  
Workflow **Optimization**

Ultravision2 Integrated Monopolar L-Hook

Ultravision2 Generator





# Revolutionising laparoscopic and robotic surgery.

Ultravision™ is the world's only advanced surgical smoke management technology that provides class-leading visualization and minimizes patient CO<sub>2</sub> exposure.

A revolutionary new system that improves the surgical experience by providing surgical smoke control at the point of origin. The Ultravision technology's unique mode of action delivers unparalleled bioaerosol control <sup>1</sup>, advanced visualization, stable pneumoperitoneum in standard and low pressure surgery, and minimizes workflow disruptions caused by surgical smoke.



# Features + key benefits

Controls bioaerosols at the site of origin

Minimizes accidental dispersal of aerosol within OR to subviral particle size

Provides advanced visualization

Maximizes performance of HD, 4K and 3D systems

Delivers stable pneumoperitoneum

Facilitates standard and low-pressure surgery

Reduces camera fogging and cleaning

Less smoke means fewer interruptions

CO<sub>2</sub> sparing

Minimizes patient exposure to cold, dry, acidic gas

Easy to use

Integrated instrument and trocar options, with no tubing required

Minimizes distractions

Silent in operation

Climate-friendly

Minimizes CO<sub>2</sub> use in laparoscopic and robotic surgery

Consumes less energy

15x less electricity required to run than a smoke evacuator<sup>2</sup>

Reduces biohazard waste

No disposable filters or tubing

## Ultravision performance

The Ultravision technology has undergone a variety of rigorous independent tests, achieving outstanding results.\*

\*All data generated using the Ultravision system.



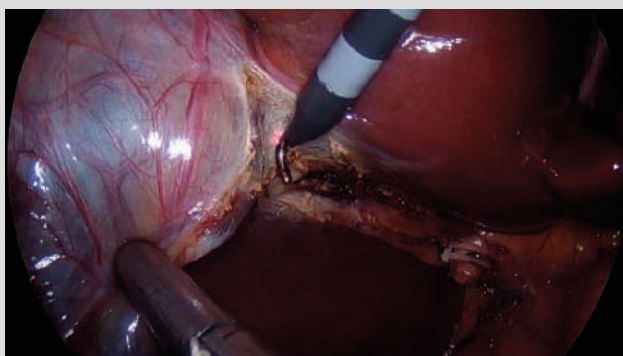
## Visualization performance

Ultravision consistently delivers advanced visualization, optimising procedural performance.

1



Venting through port



Ultravision | Advanced visualization



Advanced insufflator

Images courtesy Dr. Jin S. Yoo, Duke University Hospital, US.

In independent tests Ultravision delivered surgeon visualization scores of Excellent or Good in 80% of cases, compared to only 20% when venting.<sup>3</sup>

## The surgeon's view

When we're doing laparoscopic surgery visualization is just about everything.

We need to be able see very clearly what we are doing and anatomically what we are trying to accomplish.

Dr. Richard Rosenfield, MD  
Executive Medical Director, Pearl Women's Center, US

Further studies available on [alesi-surgical.com](http://alesi-surgical.com)



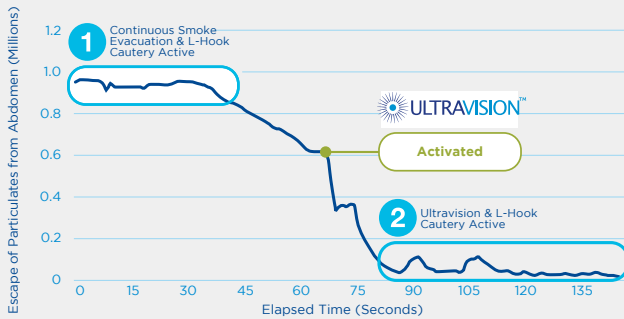
# Smoke management performance

Ultravision technology proven to be faster and more efficient than traditional smoke evacuation systems.

2

## Study

Measuring unintentional release of smoke into the operating room.  
Ultravision versus continuous smoke evacuation system.<sup>4</sup>



1) Continuous smoke evacuation experiences additional escape of smoke particulates through leaks in trocars and during instrument exchanges.

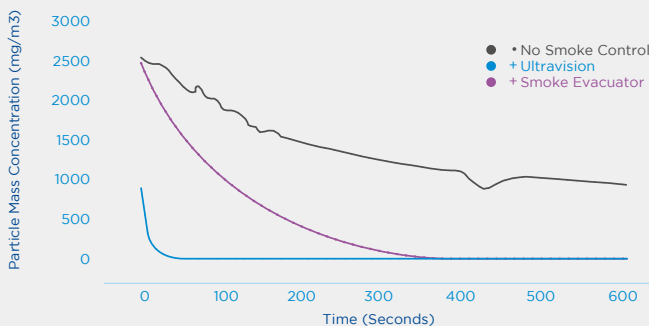
2) Ultravision suppresses smoke and bioaerosols at the point of creation which reduces the likelihood of release in the operating room.

## Result

In simulated surgery, the use of Ultravision was 23-times more effective in reducing the amount of surgical smoke aerosol that escaped into the OR due to accidental leaks during the procedure.

## Study

Measuring speed & effectiveness.  
Ultravision versus filter-based smoke evacuation system.<sup>5</sup>



## Result

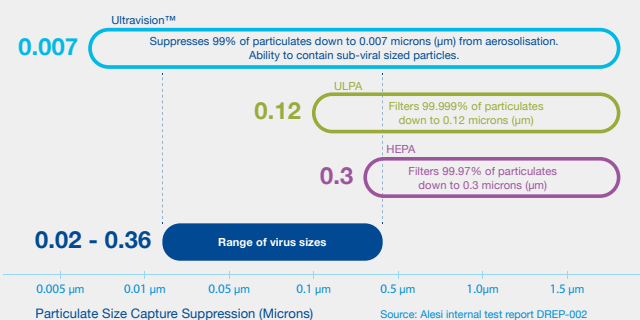
Ultravision minimizes surgical smoke, providing two levels of risk reduction:

1. Particle suppression at the point of creation.
2. More rapid elimination of smoke compared to smoke evacuators.

After 60 seconds Ultravision removes 99.9% of particles from the atmosphere, versus 30.2% with a smoke evacuator.

## Study

Removal efficiency test for sub-viral particulates.  
Suppression of particulate by size.<sup>5</sup>



## Result

1. Suppresses 99% of particulates down to 0.007 microns (µm) from aerosolisation.<sup>1</sup>

2. The only technology verified to be effective at sub-viral particle sizes.

# CO<sub>2</sub> management performance

3

Ultravision's unique system provides stable pneumoperitoneum in standard and low-pressure surgery, enables low-CO<sub>2</sub> surgery, and reduces CO<sub>2</sub> usage.

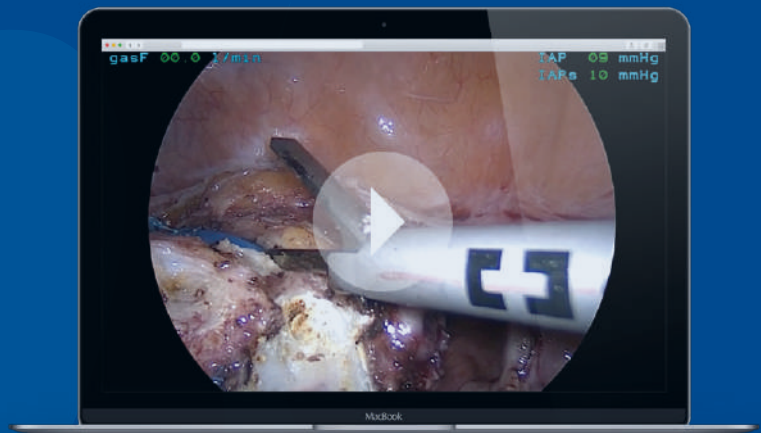
## Study

A test to explore the use of Ultravision in facilitating low pressure surgery in total laparoscopic hysterectomy (TLH) and myomectomy.<sup>6</sup>

## Result

Ultravision enhances low pressure laparoscopic hysterectomy and myomectomy. This was achieved by minimizing interruptions to surgery and exchange of CO<sub>2</sub>, providing stable pneumoperitoneum, a clear visual field throughout the procedure, and eliminating surgical smoke at the site of origin.

Watch full video at [www.alesi-surgical.com](http://www.alesi-surgical.com)



# Improving OR efficiency

Ultravision enables a more efficient OR through time savings and reduced CO<sub>2</sub> usage.

## Study






Evaluate Ultravision performance during laparoscopic cholecystectomy.<sup>3</sup>

## Result

1. 8 minutes per case saved.
2. Zero pauses in 77% of procedures.
3. No camera cleaning required in 95% of cases.



Visit [alesi-surgical.com](http://alesi-surgical.com) to read full study

Order Number	Item Description	
DPD-006-001	Ultravision2 Generator	
DAD-001-003	Ultravision Ionwand Pack (x10)	
DPD-006-201	Ultravision2 Integrated Monopolar L-Hook (x5)	
DAD-003-014	Ultravision 5mm Trocar (x6)	
DPD-007-002	Ultravision IonPencil (x40)	

## What the surgeons say

“I have used Ultravision for the last two years in most of my laparoscopic cases. The advancements in Ultravision2 have vastly improved overall performance and ease of use. The new integrated monopolar instrument is a game-changer for the technology.”

Dr. Urs Pabst-Giger, Senior Consultant Surgeon,  
University Hospital Münster, Germany



\*1 Gohler D et al, Journal of Aerosol Science (accepted)

\*2 Based on Ultravision2 maximum consumption of 62VA versus representative smoke evacuator of 1000VA.

\*3 Ansell et al, Electrostatic precipitation is a novel way of maintaining visual field clarity during laparoscopic surgery: a prospective double-blind randomized controlled pilot study Surgical Endoscopy (2014) 28: 2057-2065

\*4 Buggisch et al, Experimental Model to Test Electrostatic Precipitation Technology in the COVID-19 Era: A Pilot Study Journal of American College of Surgeons, (2020), 231 (6) 704-712

\*5 Alesi internal reports DVER-006-015 and DREP-002

\*6 Levine, D et al, "Electrostatic Precipitation in Low Pressure Laparoscopic Hysterectomy and Myomectomy" (2020), JSLS, Volume 24, Issue 4.

## Solving surgical smoke problems

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