

**BOWA**  
SHE SHA

**SIMPLE.**  
**EFFICIENT.**  
**SAFE.**

## SHE SHA surgical smoke management

Make a smoke-free  
operating theatre  
your gold standard!



# SHE SHA fume evacuation system

A healthy and safe working environment thanks to clean air in the operating theatre

- Laser and electrosurgical procedures produce harmful fumes when tissue is vaporised.
- The only effective protection against electro-surgical smoke is extraction at the source.

Our solution, in line with recommendations – start at the source of the smoke!¹



#### Automatic activation

For monopolar handpieces using a sensor



#### 4-stage filter system

For efficient elimination of all harmful substances



#### Quiet yet powerful

Max. 55 dBA with a suction power of 700 l/min



#### Easy to use

Automatic filter detection with plug & play capability



Safe



Protecting

# ARC and SHE SHA

The ideal system for your operating theatre



### Activation via cable!

**Automatic** activation of fume evacuation system is possible via a connecting cable between the two devices. Works with monopolar and **bipolar** instruments.

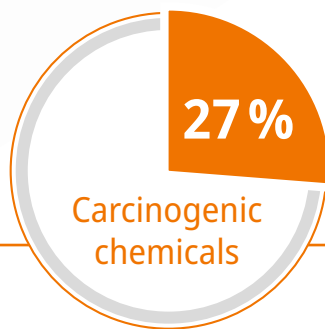


# Electrosurgical smoke

The invisible risk

Have you ever wondered about the health effects of surgical smoke inhaled in a single day in the operating theatre?

**Surgical smoke contains  
150 substances –  
40 of them carcinogenic<sup>2</sup>**



**The amount of smoke created in a  
single day in an operating theatre<sup>3</sup>  
is equivalent to smoking:**



Depending on the dose, surgical smoke can lead to many symptoms that you are probably familiar with from your everyday work in the operating theatre<sup>4</sup>:

- Headaches
- Fainting
- Nausea
- Muscle weakness
- Irritation of the eyes and respiratory tract
- Triggering of reactions in asthmatics

Possible long-term damage:

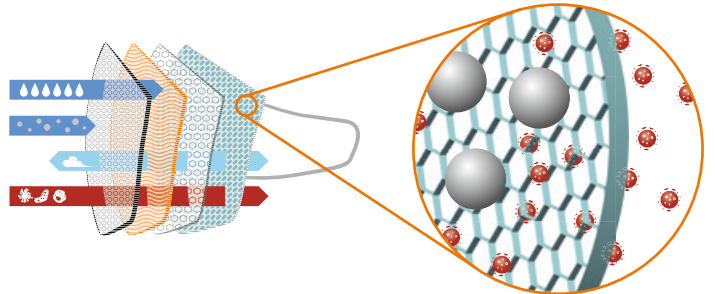
- The HPV virus was detected in 80% of smoke samples taken during the treatment of HPV positive patients. <sup>5</sup>
- Increased risk of chronic pulmonary disease (asthma and pneumonia) and lung cancer <sup>6</sup>



If I can smell it  
then it is already in my lungs!

# When it comes to surgical smoke, a surgical mask gives a false sense of security!

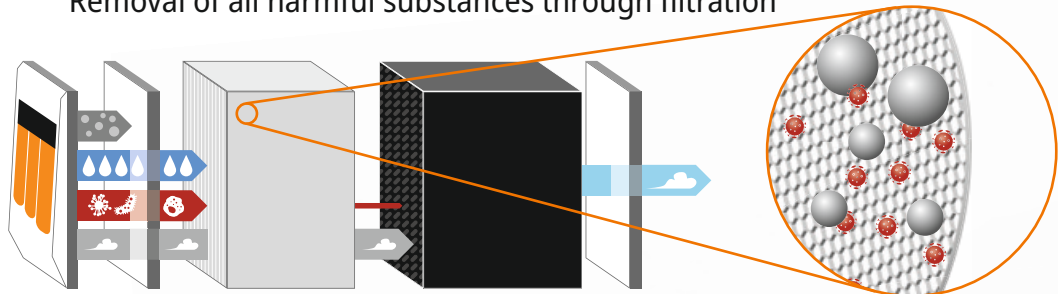
- Standard surgical masks provide protection against particles larger than  $5\ \mu\text{m}^7$ .
- 77% of particles in smoke are smaller than  $1.1\ \mu\text{m}^8$ .
- Bacteria have a size of  $0.3\text{--}30\ \mu\text{m}$  whereas viruses are much smaller at  $0.01\text{--}0.3\ \mu\text{m}$ .



A face mask does not provide sufficient protection, as the majority of harmful substances pass through it and enter the breathing space!

## Maximum occupational safety

Removal of all harmful substances through filtration



Harmful substance-specific filtration:

- In **stage 1**, the coarse filter removes larger particles in the surgical smoke.
- The patented design of the ULPA-15 filter in **stage 2** efficiently removes 99.999% of the harmful substances in surgical smoke.
- In **stage 3**, a high quality activated carbon filter adsorbs and removes odours and toxic gases.
- Finally, in **stage 4**, there is a post-filter that seals the system and prevents fine particles from being emitted.

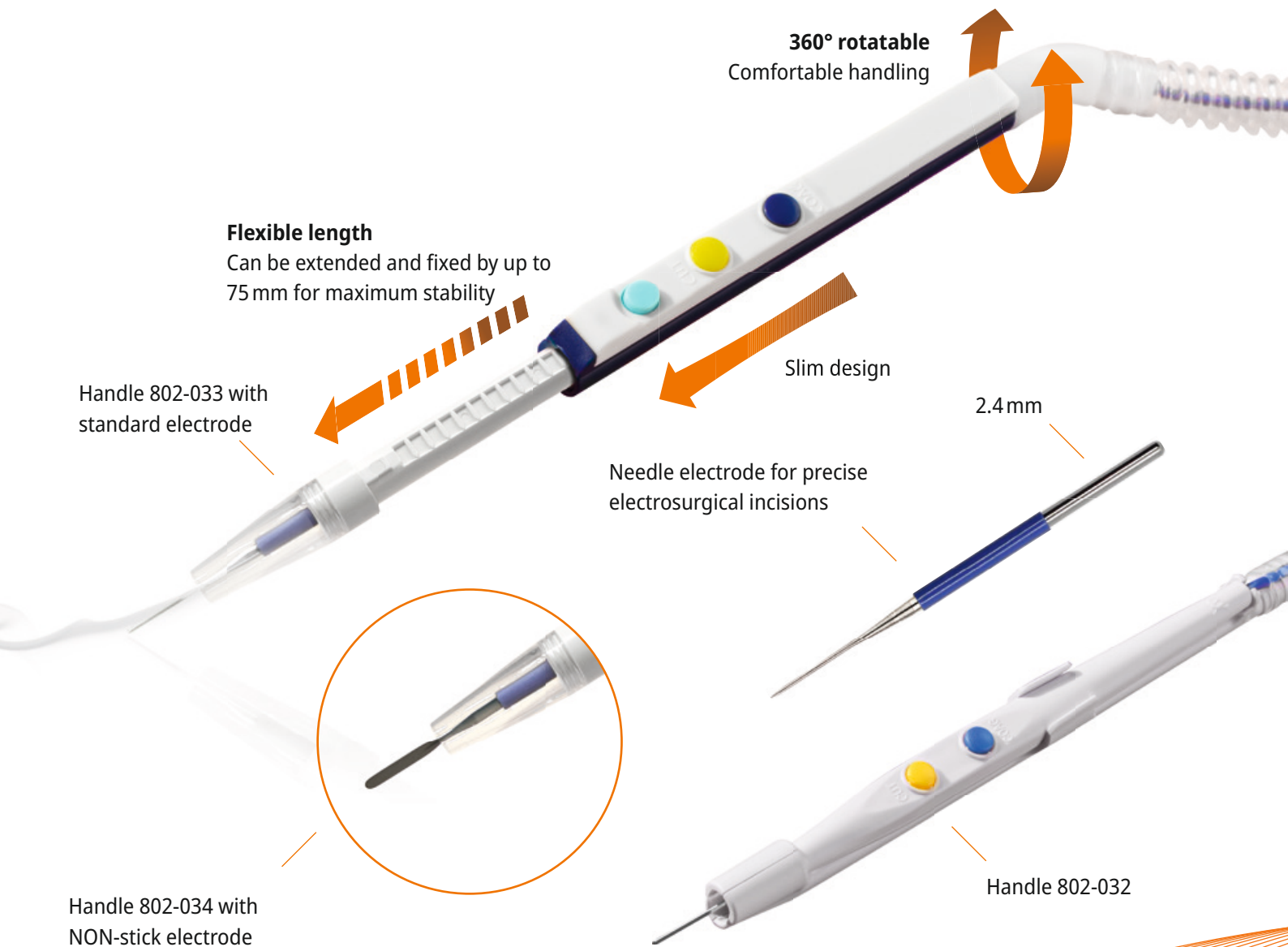
The filter system removes particles up to  $0.1\ \mu\text{m}$  in size.

**So that you can breathe again with peace of mind!**


# SHE SHA accessories









Flexibility meets reliability

The perfect partner for the SHE SHA fume evacuation system – single-use fume evacuation handles in a range of different designs from BOWA MEDICAL.



# SHE SHA ORDERING INFORMATION

Designation	REF
 SHE SHA fume evacuation system	950-001
 SHE SHA activation sensor	Included
 Pneumatic foot switch	Included

 SHE SHA filter for 35 hours (2 pcs)	951-001	 SHE SHA handle, 2-switch, knife, 3 m, single-use, sterile, incl. holster	802-032
 SHE SHA-ARC connection cable, 70 cm*	900-060	 Needle electrode for SHE SHA handle 802-033 and 802-034 (shaft 2.4 mm, disposable electrodes, sterile)	DNES620
 SHE SHA handle, adjustable length, NON-stick knife, 3 m, single-use, sterile	802-034	 SHE SHA hose, for laparoscopy, 3 m, single-use, sterile (12 pcs.)	952-200
 SHE SHA handle, adjustable length, 2-switch, knife, 3 m, single-use, sterile, incl. holster	802-033	 SHE SHA hose, for handle, 3 m, single use, sterile	952-001

\* Only compatible with ARC Energy systems

## TECHNICAL DETAILS

SHE SHA	
Audible emission	Max. 55 dBA
Size (H x W x D)	15 cm x 28 cm x 39.5 cm
Flow rate	Max. 708 litres per minute (with 22 mm hose)
Weight	4.4 kg (5.5 kg incl. filter)
Filter type	4-stage filtration (pre-filter, ULPA, activated carbon, post-filter)
Particle size	0.1 – 0.2 µm at 99.999% efficiency
Voltage	220 – 240 V

<sup>1</sup> SAGES: Society of American Gastrointestinal and Endoscopic Surgeons. EAES: European Association for Endoscopic Surgery and other Interventional Techniques. AORN: Association of perioperative Registered Nurses.

<sup>2</sup> Andreasson S, Mahteme H, Sahlberg B, Anundi H. Polycyclic Aromatic Hydrocarbons in Electrocautery Smoke during Peritonectomy Procedures. *Journal of Environmental and Public Health*. 2012; 1-6

<sup>3</sup> Hill DS, O'Neill JK, Powell RJ, Oliver DW. Surgical smoke – a health hazard in the operating theatre: a study to quantify exposure and a survey of the use of smoke extractor systems in UK plastic surgery units. *Journal of plastic, reconstructive & aesthetic surgery*. JPRAS. 2012 Jul;65(7):911-6. PubMed PMID: 22445358.

<sup>4</sup> Ilce A, Yuzden GE, Yavuz van Giersbergen M. The examination of problems experienced by nurses and doctors associated with exposure to surgical smoke and the necessary precautions. *J Clin Nurs*. 2017; 26: 1555-61

<sup>5</sup> Sood AK, Bahrani-Mostafavi Z, Stoerker J, Sone IK. Human papillomavirus DNA in LEEP plume. *Infectious diseases in obstetrics and gynecology*. 1994; 2: 167-70

<sup>6</sup> Ball K. Compliance with surgical smoke evacuation guidelines: Implications for practice. *Aorn j*. 2010; 92: 142-9

<sup>7</sup> Hill DS et al. Surgical smoke—a health hazard in the operating theatre: a study to quantify exposure and a survey of the use of smoke extractor systems in UK plastic surgery units. *J Plast Reconstr Aesthet Surg*. 2012;65(7):911-916.

<sup>8</sup> Benson SM, Novak DA, Ogg MJ. Proper use of surgical n95 respirators and surgical masks in the OR. *Aorn j*. 2013; 97: 457-67; quiz 68-70.

## BOWA MEDICAL provides the solution – SHE SHA fume evacuation system. Start at the source of the smoke!

Contact your authorised BOWA medical  
device consultant now.

[support@bowa-medical.com](mailto:support@bowa-medical.com)



**BOWA**  
A C A D E M Y

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