

# EXPlasma™

Compact Low Temperature Plasma Sterilizer



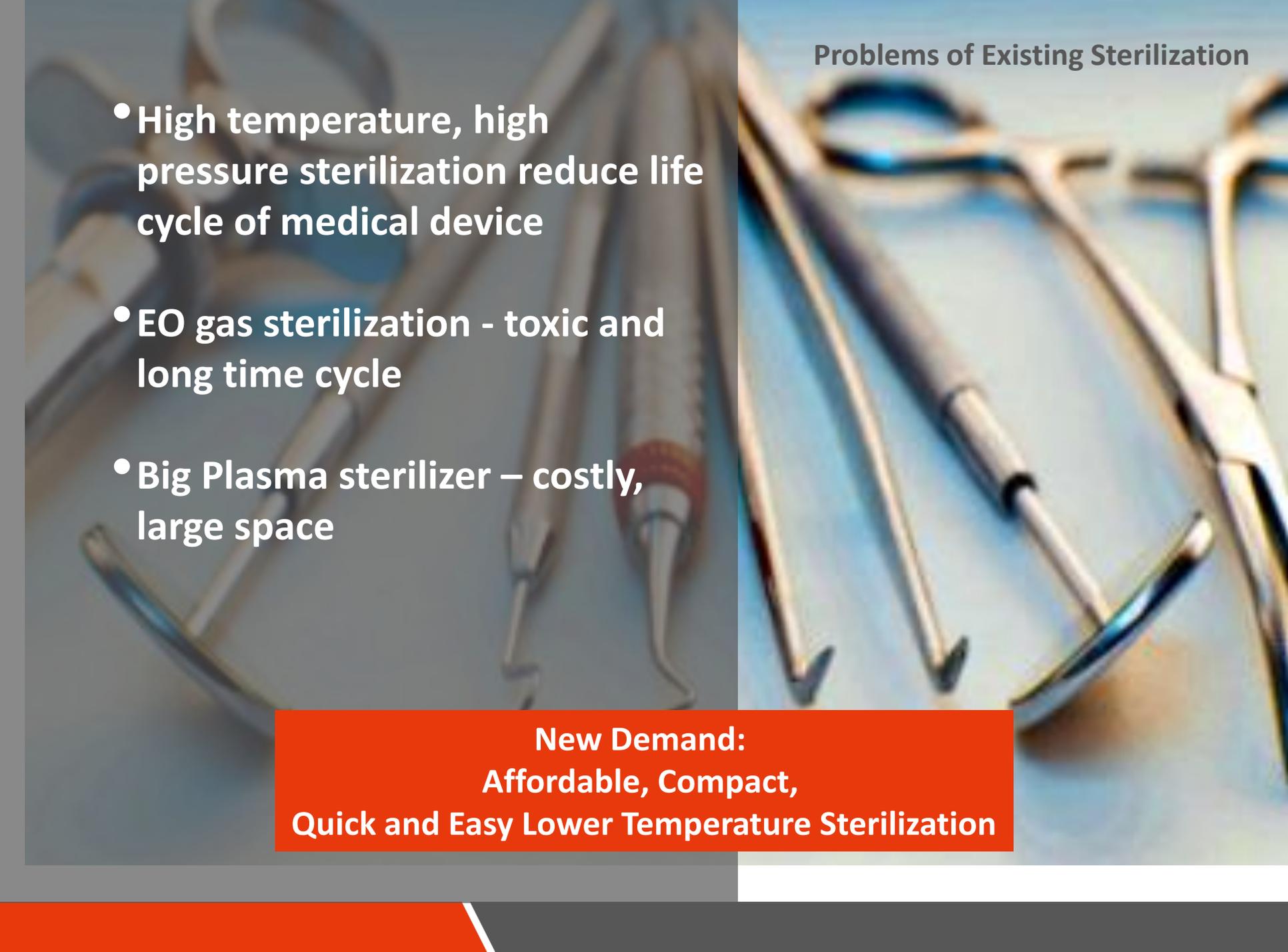
 **CUBE** Instrument Inc.

## CUBE Instrument Inc.



### History

- 2015** Development of proto and alpha model
- 2016**
  - Founded CUBE Instrument Inc.**
  - KFDA license
  - GMP
- 2017**
  - EXPlasma S5**, 300 medical institutions installed
  - Completed development of upgrade model **EXPlasma Z7**
- 2018**
  - Global exhibition promotion (Dubai, Japan, Vietnam, Taiwan, etc.)
  - EXPlasma S5**, 450 medical institutions installed
- 2019**
  - ISO13485**
  - EXPlasma Z7**, Completed license and released
- 2021**
  - CE Certification**
  - 2000 units installed** (Domestic Korean market)
- 2023** **3000 units installed** (Domestic Korean market)



## Problems of Existing Sterilization

- High temperature, high pressure sterilization reduce life cycle of medical device
- EO gas sterilization - toxic and long time cycle
- Big Plasma sterilizer – costly, large space

**New Demand:  
Affordable, Compact,  
Quick and Easy Lower Temperature Sterilization**

## Compact Plasma Sterilization

### Affordable

- Cost less
- Maintenance less:  
Oilless pump



### Fast

- 10 min (flash cycle)
- 20 min (Standard cycle)

### Sterilization Acceleration Engine

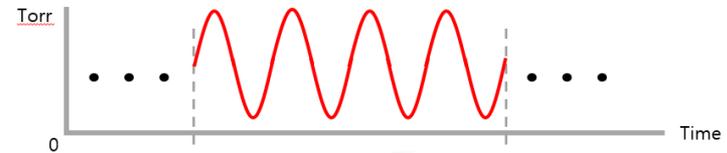
- Sterilization power up
- Patent

**Efficient Sterilization -  
Small and Medium Size Clinics**

**3**  
**Patents**



## Sterilization Acceleration Engine (SAE)



### Pressure Change in Sterilization Chamber

Forcibly changes the pressure in the sterilization chamber to generate kinetic energy!

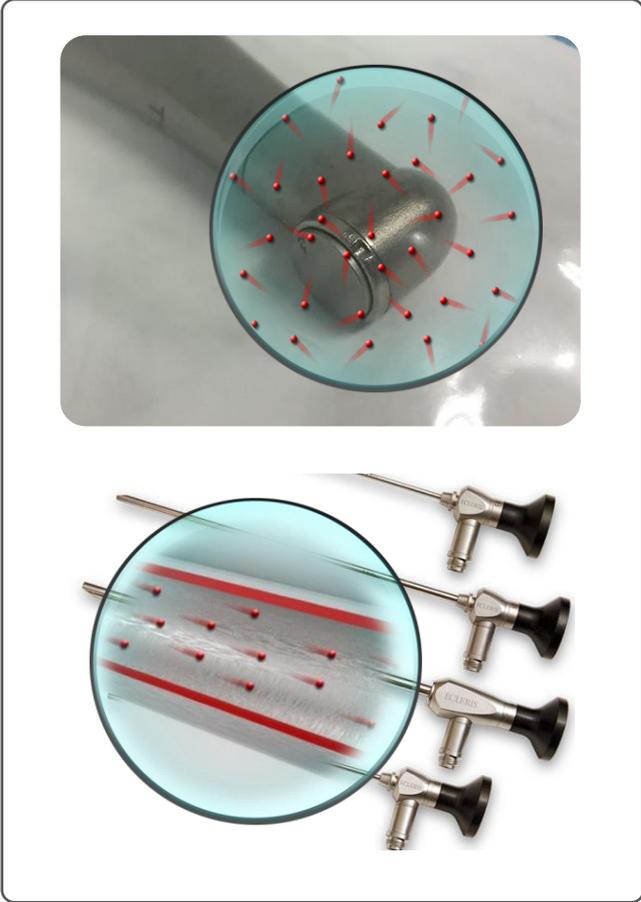
- Quick Sterilant Diffusion and Penetration
- Minimize Chemical Burn – moisture removal

**Maximize Sterilization Efficiency!**

# Maximize efficiency by adding kinetic energy to the sterilization chamber

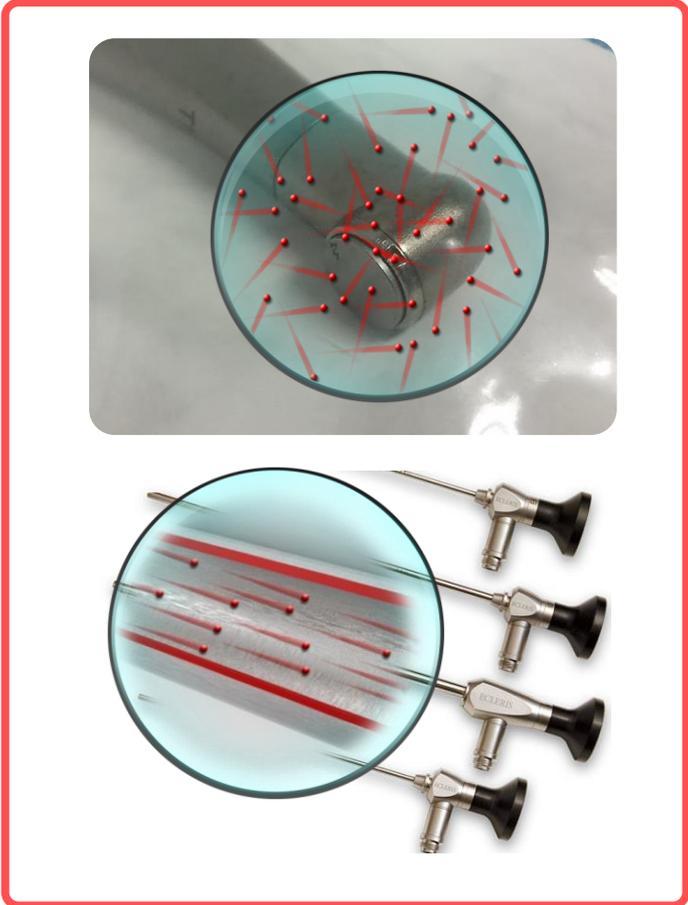
## Conventional Technology

After disinfectant injection, rely on natural diffusion



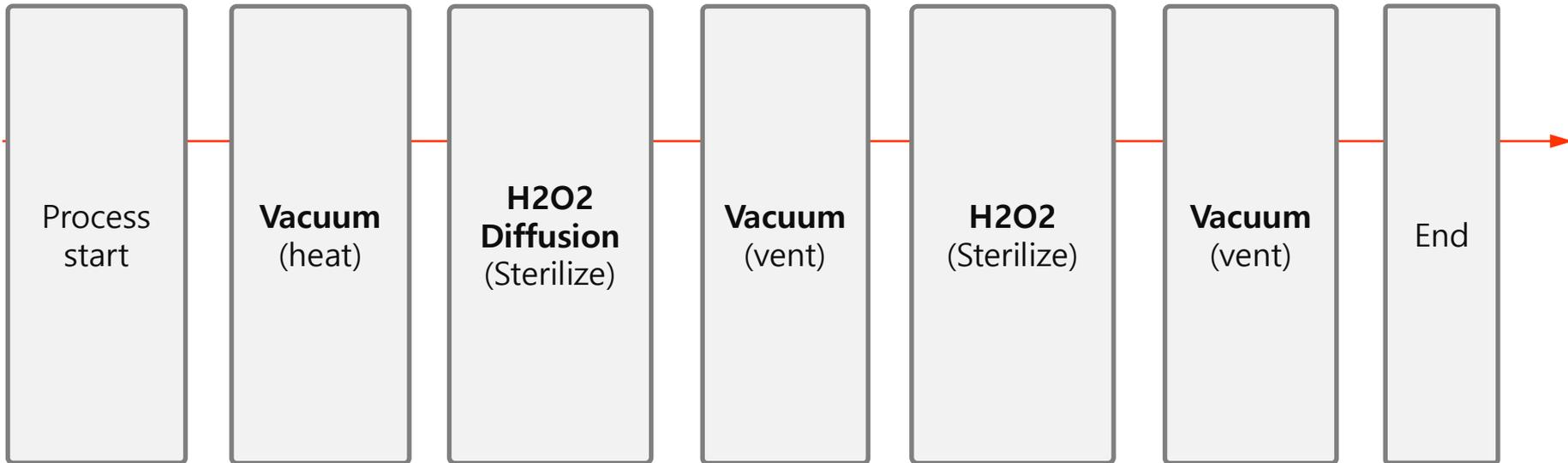
## EXPlasma - SAE

After disinfectant injection, add kinetic energy to natural diffusion



# STERILIZATION CYCLE

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Cost Effective  
Speed



**EXPlasma™**



P   
(‘S’ model)

Compact  
Convenience

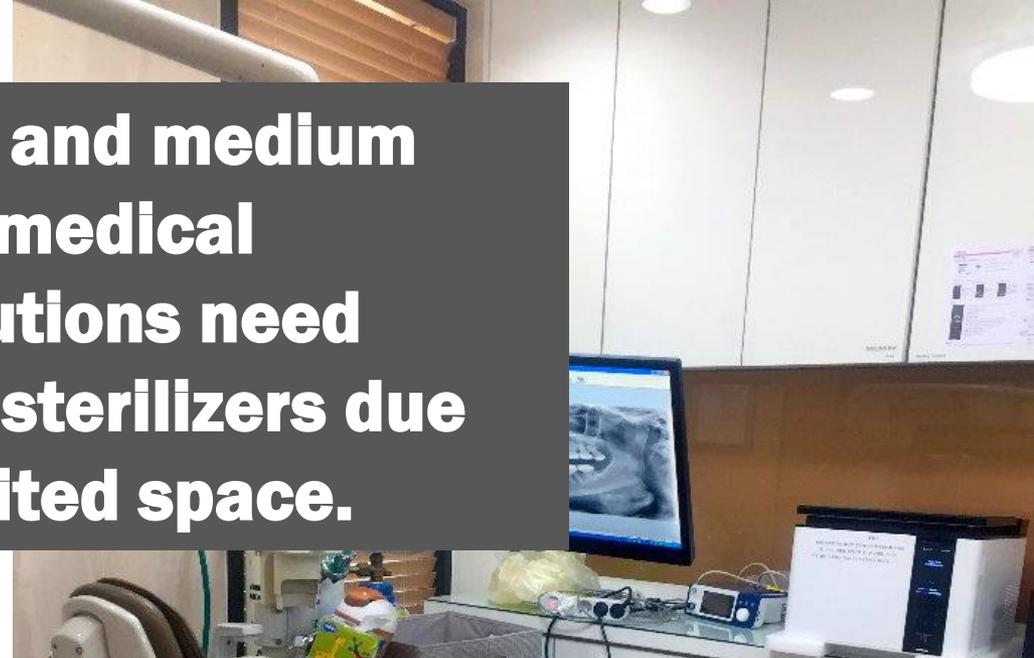
J   
(‘S’ model)



L   
(‘C’ model)



**Small and medium sized medical institutions need small sterilizers due to limited space.**





“ Thanks to EXPlasma, we no longer experience condensation. ”

“ I was freed from the inconvenience of having to completely dry the tool! ”



“ Fast sterilization - It's economical and easy to use! ”



## Tattoo / Piercing

Domestic, 2018: Tattoo market USD 2 billion (including semi permanent makeup)

*Ref: Korea Tattoo Association, 2018*

**Additional Market**



## Manicure / Beauty Shop

Domestic, 2017:

Annual nail art industry USD 300 million

*Ref: Chosun Biz, Korea Nail Beauty Industry Association 2017*

## Compatible

### Metal

- Aluminum 6000 series
- Stainless Steel 300 series

### Non-Metal

Latex, Nylon, Silicon, Acrylonitrile-butadiene-styrene (ABS), Delrin, Polyvinyl chloride (PVC), Glass (USP Type I Borosilicate), density polyethylene, Neoprene rubber (Polychloroprene), Kraton, Phenolic resin, Polycarbonate, Polyetherimide, Polyethylene terephthalate (PET), Poly methyl methacrylate (PMMA), Poly (Phenyl sulfone), Polypropylene, Polystyrene, Polysulfone, Polytetrafluorethylene (PTFE), Polyurethane, EVA (Ethyl vinyl acetate)

## **LUMEN DEVICE LENGTH & SIZE**

Teflon, Silicon: Inside diameter: >1mm & Length: <500mm

Stainless steel: Inside diameter: >1mm & Length: <300mm

# LOADING SAMPLE



**Implant kit**



**Hand-piece**



**Plastic device**



**Gutta-Percha, Endo File**

- ◆ Main target market : Small & medium hospitals
  - Dental, cosmetic surgery, dermatology, ophthalmology
- ◆ Supplemental device to auto clave : no competition, additional device
- ◆ Emphasize trend : Use of low temperature plasma sterilizer for certain items
  - Fast cycle time & longer life cycle of devices (less damage with Low temp)
- ◆ Price competitiveness - Major famous steam sterilizer brands
- ◆ No maintenance cost - Use of oilless pump (Big plasma sterilizers high maintenance cost. More than \$1,000 per year)
- ◆ Few manufacturers - 7L compact plasma sterilizer
- ◆ No competitors from US & European brands (Big plasma sterilizer:Sterrad, US)
- ◆ Reference in Korea market : more than 3,000 units has been installed

# EXPlasma™

Compact Low Temperature Plasma Sterilizer



THANK YOU VERY MUCH

 **CUBE** Instrument Inc.