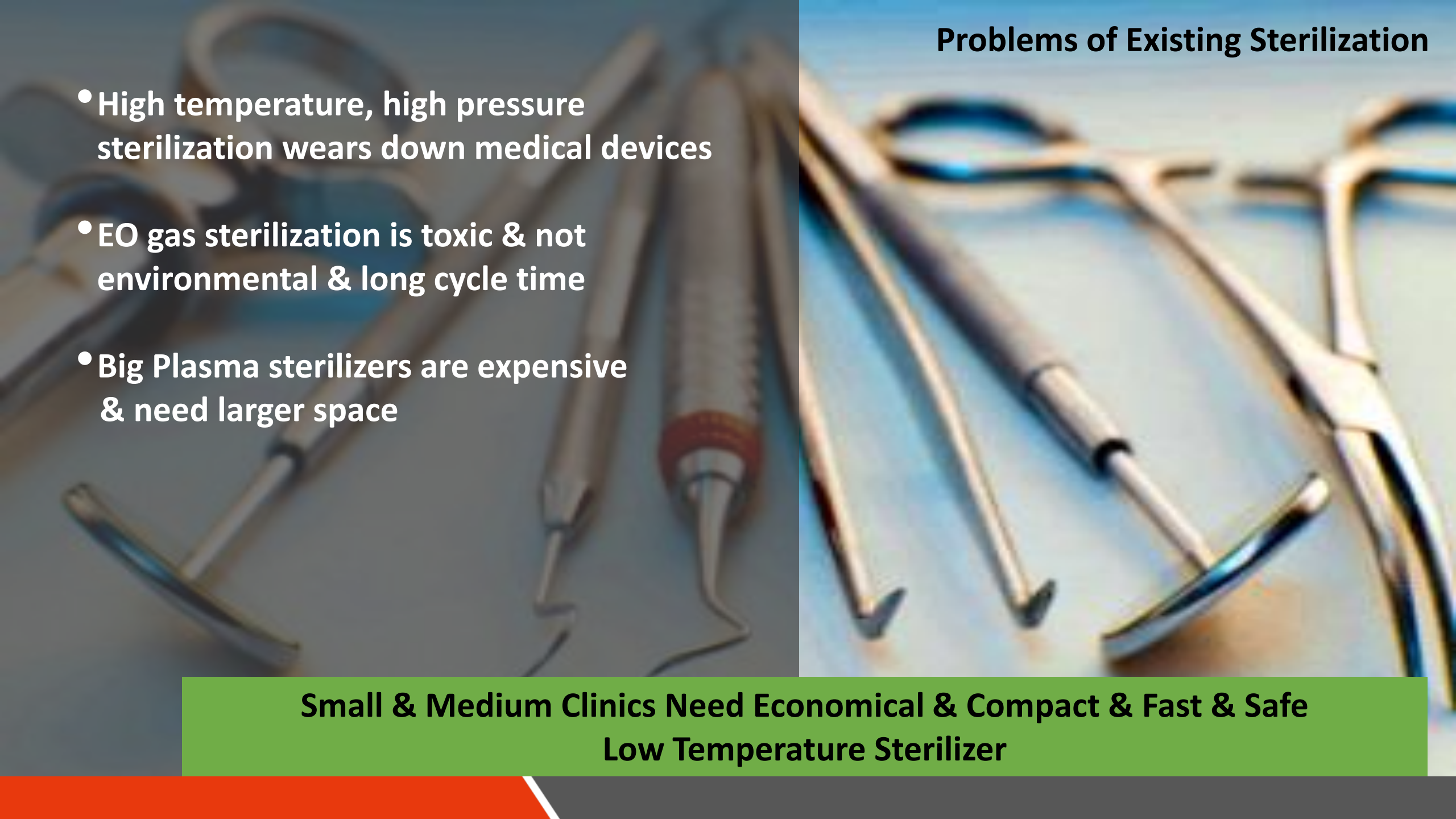


EXPlasma™

Compact Low Temperature Plasma Sterilizer



 **CUBE** Instrument Inc.

- 
- High temperature, high pressure sterilization wears down medical devices
 - EO gas sterilization is toxic & not environmental & long cycle time
 - Big Plasma sterilizers are expensive & need larger space

Problems of Existing Sterilization

**Small & Medium Clinics Need Economical & Compact & Fast & Safe
Low Temperature Sterilizer**

EXPlasma Z7 Compact Low Temperature Plasma Sterilizer

ECOCOMICAL

- Competitive Price: Unit & Cartridge
- No complex maintenance & cost

FAST CYCLE TIME

- 10/20min Flash/Standard Mode
- Rapid turn over rate: Less medical devices required

SAFE

- Remains non-toxic residue (water & oxygen)



USER FRIENDLY

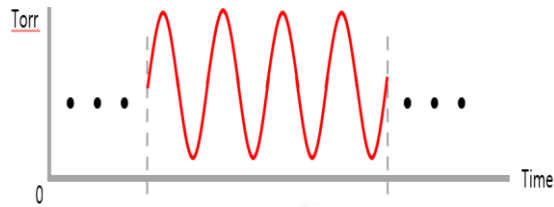
- Easy to install & use (Plug in and start cycle)

LONGER LIFE OF MEDICAL DEVICES

- No damage to expensive heat sensitive items

Best Sterilization Choice for Small & Medium Size Clinics

Sterilization Acceleration Engine (SAE)

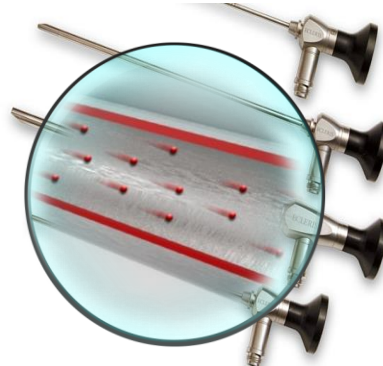
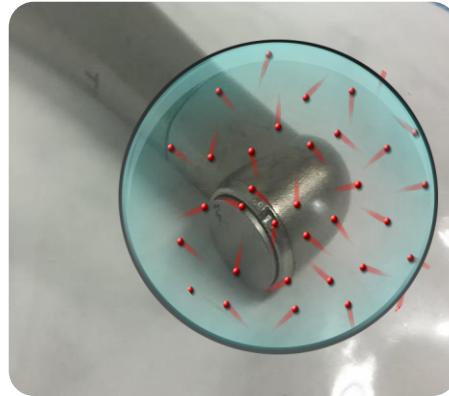


Pressure Change in Sterilization Chamber

- Forcibly changes pressure in sterilization chamber to generate kinetic energy
- Quick Sterilant Diffusion and Penetration

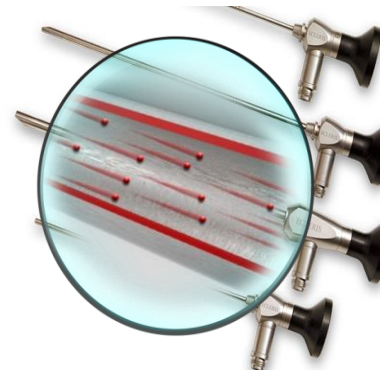
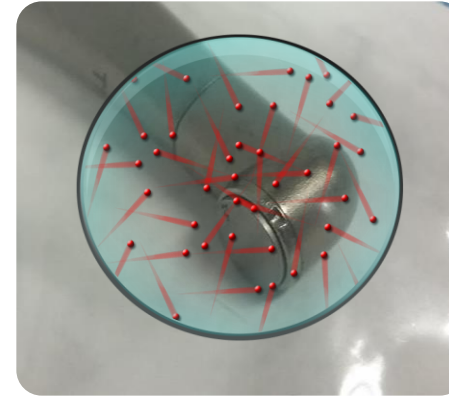


Conventional Technology
: After H₂O₂ injection,
natural diffusion

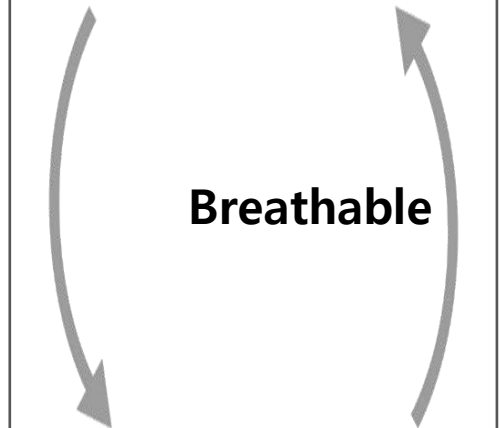


EXPlasma Z7 - SAE

After H₂O₂ injection, **generate kinetic energy to natural diffusion**

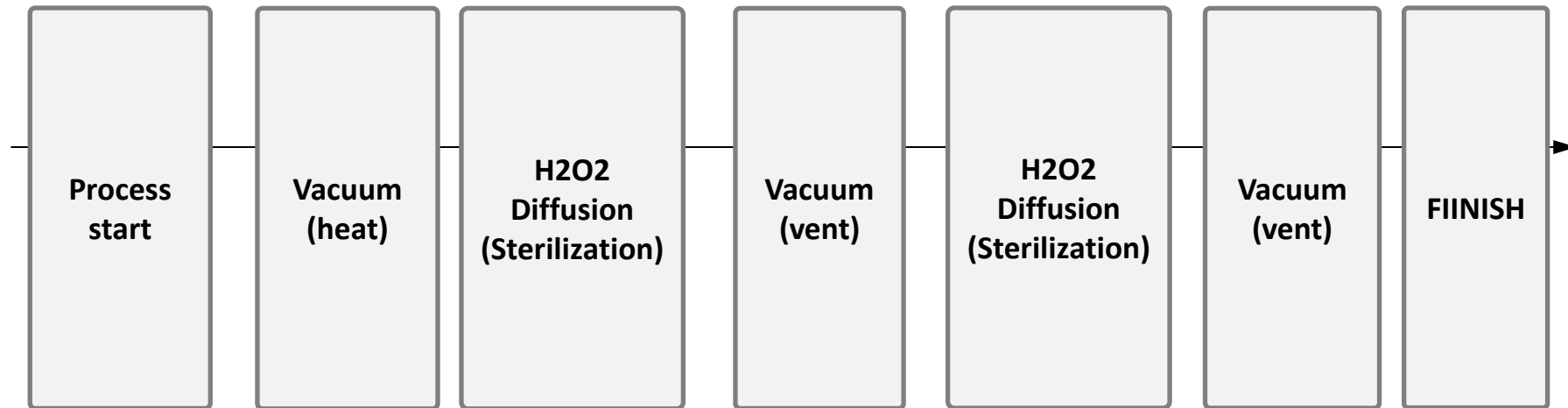


Make pouches breathable during cycle



Strong Penetration Power → Successful Sterilization

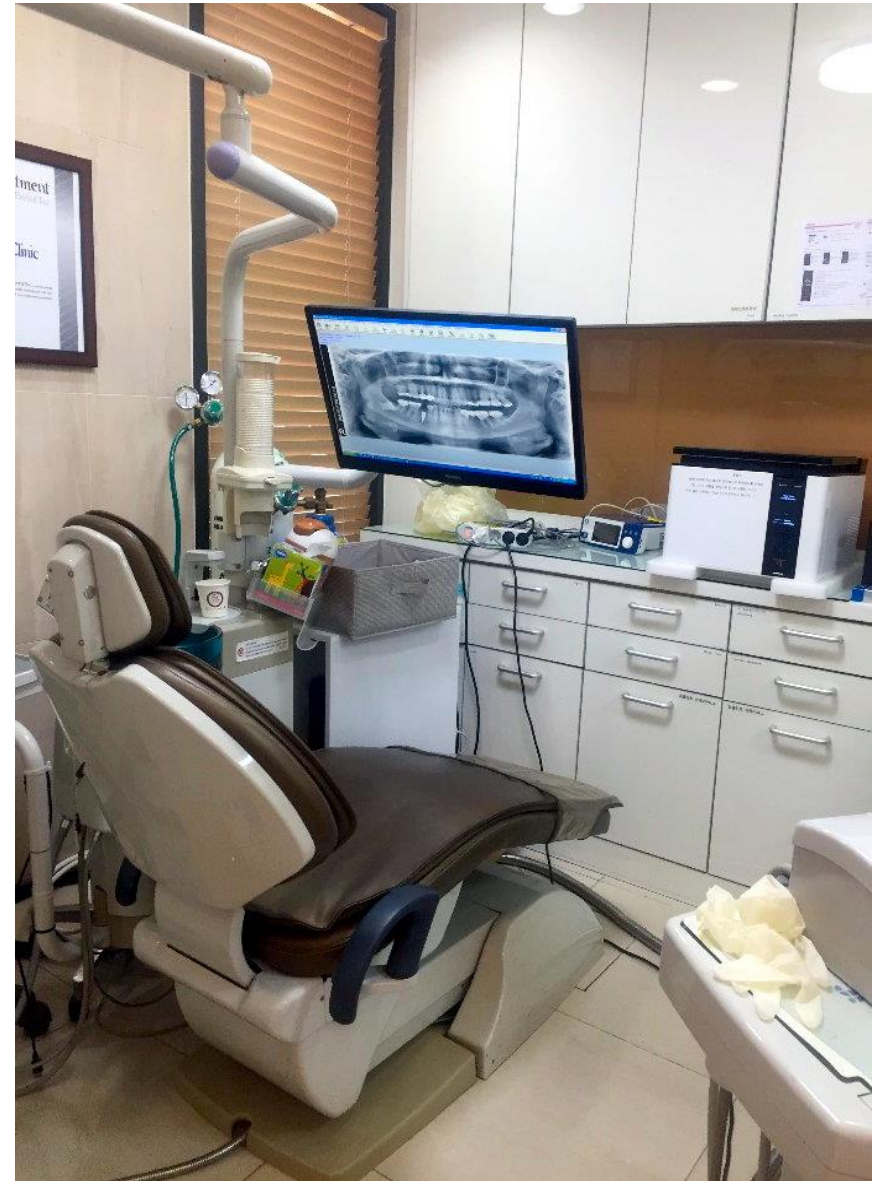
STERILIZATION CYCLE



Compact Tabletop Anywhere



Place Wherever Users want



Most Suitable Low Temperature Sterilizer for Clinic

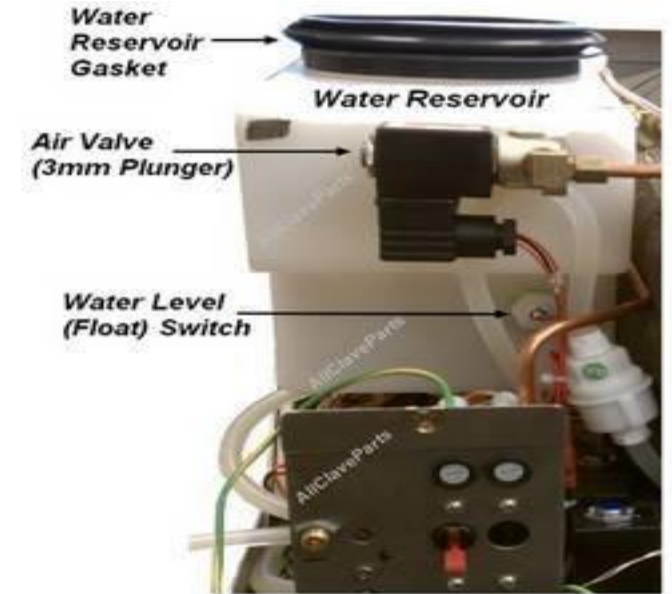
- EXPlasma Z7 no need additional plumbing or ventilation system
- EXPlasma Z7 no inconvenient maintenance steps
- EXPlasma Z7 Compact Tabletop design utilize the space in clinics



EO Gas Sterilizer – Change Cartridge Regularly

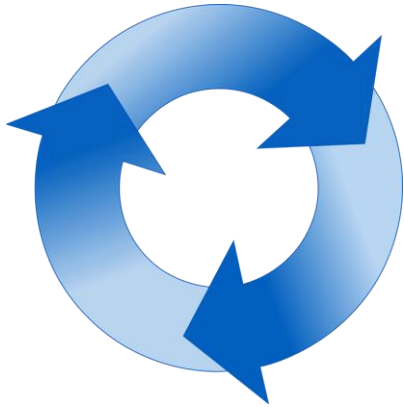


EO Gas Sterilizer – Install EO Abator



Steam Sterilizer – Draining Water

Customers Looking For Low Temperature Sterilizer



Fast Sterilization Time

Cycle Time

only **10 minutes to 20 minutes** depending on the mode



Low Running Cost

Cycle Cost

much **cheaper** VS big size plasma sterilizers



Any Place

Installation

wherever user wants, install anywhere

Customers Looking For Low Temperature Plasma Sterilizer



Longer Device Life

Low Temperature

No damage expensive & heat sensitive medical devices

Autoclave – High Temperature



Safe Operation

Non toxic gas

Residual : Water & Oxygen

EO Sterilizer : Toxic gas



Safe Sterilization Environment

No aeration need

No hygienic problems

COMPARISON

Sterilizer	Autoclave (Physical Sterilization)	EO Gas Sterilization (Chemical Sterilization)	PLASMA Sterilization (H2O2 Sterilization) EXPlasma Z7	Dry-heat Sterilization (Physical Sterilization)
Sterilization Method	Steam Injection	E.O Gas Injection	Vaporized hydrogen peroxide Injection	High Temperature Dry Heat Circulation
Sterilization Agent	97% Saturated Steam	100% E.O. gas or E.O. gas mixtures	Vaporized Hydrogen Peroxide	Hot Air
Temperature & Pressure	121 - 135°C (1.1-2.1 bar)	37 - 60°C (1.5-3.0 bar)	≤ 60°C (0 - 1.013 bar)	140 - 230°C
Cycle Time	1-3 hours	4-16 hours	10 - 60min	2-5 hours
Sterilizable Items	Metal medical instruments (surgical instruments), materials that can withstand high humidity	High temperature and moisture- resistant medical appliances, various plastics and rubber products	Heat & Moisture sensitive instruments (catheters, endoscopy, electrosurgical probes, handpieces, etc.)	Glass, dried compounds, powdered products (powder, etc.), oil, Vaseline, gauze, etc.
Prohibited Items	Items that are difficult to penetrate wet heat, such as sharp blades, powders, and silicon (Vaseline, oil, powder, etc.)	Wet items, leather items, liquids, Vaseline, powder, oils, etc.	Absorbent substances (paper, linen, cellulose, etc.), liquids, oils, powders	Rubber/Plastic products, flammable materials (paper, woven fabric, etc.)
Features & Merits	Available to sterilize the cloth Non-toxic	For the items that moisture or heat sensitive and cannot be sterilized by steam sterilization	Fast Sterilization Process Compact Size Easy Maintenance No cool down time Non toxic after the cycle	Affordable Price Low Operation Cost Non-toxic

COMPARISON vs AUTOCLAVE & EO



Manufacturer	CUBE INSTRUMENT	W&H	Melag	Andersen
Type	Low Temperature H2O2 Plasma Sterilizer	Steam Sterilizer		ETO
Product	Z7	Lara	31B	Anprolene AN-75i
Cycle Time	10 – 20 min	37 – 76 min	20 – 70 min	12 – 24 hrs
Temperature	< 60°C	121°C - 134°C	121°C - 134°C	20°C - 32°C
Capacity	7L	17L/22L	17L	35L
Weight	33kg	42.5kg/44kg	45kg	25kg
Features	- Processing Temp. : < 60°C - No need additional facility - Safety for Users & Environment - Sterilize heat and moisture-sensitive instrument without damage - Gentle treatment for delicate device	- Commonly Used in the clinics - Need additional cooling time after sterilization - Heat & moisture sensitive device unavailable - Can cause rust on the instruments - Damage device sharpness - Need additional facility (water plumbing etc.)		- Processing Time : 10hr - Process Temp : 55°C - Need additional facility for ventilation - Toxic Residue : Mutagenic & carcinogenic properties are remains

COMPARISION vs H2O2 & PLASMA STERILIZER



Manufacturer	CUBE INSTRUMENT	STERIS		FORTIVE	
Product	EXPlasma Z7	V-Pro 60	V-Pro Max 2	STERRAD NX	STERRAD 100NX (1-Door System)
Cycle Time	FLASH: 10 min STANDARD: 20 min	Lumen: 60 min Non-Lumen: 28 min Flexible: 38 min	Lumen: 55 min Non-Lumen: 28 min Flexible: 38 min	Lumen: 38 min Standard: 28 min	Lumen: 47 min Flex: 42 min Express: 24 min Duo: 60 min
Temperature	< 60°C	50°C		47°C - 56°C	
Capacity	7L	60L	136L	30L	152L
Dimension (WDH, mm)	390 x 440 x 300	787 x 787 x 711	838 x 1908 x 973	554 x 792 x 930	775 x 1054 x 1800
Weight	33 kg	116 kg	386 kg	127 kg	382 kg

COMPARISON vs H2O2 & PLASMA STERILIZER



Manufacturer	CUBE INSTRUMENT	STERIS		FORTIVE	
Product	EXPlasma Z7	V-Pro 60	V-Pro Max 2	STERRAD NX	STERRAD 100NX (1-Door System)
Cartridge cost/ per cycle	STANDARD MODE (LESS THAN \$3)	VAPROX HC (113mL, Standard) \$20 VAPROX HC (29.6mL, Air shippable) \$22		Sterilant Cassette \$25	Sterilant Cassette \$35
Total cycle/ per cartridge	FLASH MODE: 30 cycles STANDARD MODE: 15 cycles	Standard: 15 cycles (30 Fast/Non Lumen) Air shippable: 4 cycles (6 Fast/8 Non Lumen)		5 Cycles If error occurs during the cycle, the cassette should be disposed	
Sterilant type	Cartridge	BOTTLE		CASSETTE	
Shelf life of cartridge	12 months	15 months		12 months	
Shelf life after 1 st use in unit	60 days	14 days		10 days	

COMPATIBLE MEDICAL DEVICES

- Cranial pressure transducer cables
- Cryoprobe
- Defibrillator paddles
- Dopplers
- Electrocautery instruments
- Endoscopic instruments
- Esophageal dilators
- Fiberoptic lite cables
- Laryngoscope blades
- Laser handpieces, fibers, and accessories
- Metal instruments
- Ophthalmic lenses (diagnostic, magnifying)

- Patient lead cables
- Pigmentation handpieces
- Radiation therapy equipment
- Resectoscope/working elements and sheaths
- Rigid endoscopes
- Shaver handpieces
- Flexible endoscopes
- Stereotactic equipment and batteries
- Trocar sheaths
- Ultrasound probes
- Video cameras and couplers
- Micro instrument kit

- Laparoscopic Grasping Forceps
- Bipolar Forceps with cables
- Vessel Sealer
- Electrosurgical Pencils
- Endotracheal Tube
- Surgical Staples
- Micro Instrument Set
- Oxygen tubing
- Suction & Irrigation tube
- Oxygen mask
- Surgical tips
- Catheters
- Biopsy forceps



YES

Metal

Aluminum
Stainless Steel

Non-metal

Acrylonitrile butadiene styrene (ABS)
Delrin
Ethyl vinyl acetate (EVA)
Fluorinated ethylene propylene (PFTE)
Glass, USP Type 1 borosilicate
High density polyethylene
Kraton
Latex
Polyethylene
Monel
Phenolic resin
Polycarbonate (PC)

Polyetherimide (PEI)
Polyethylene terephthalate (PET)
Polymethyl methacrylate (PMMA)
Polyphenyl sulphone
Polypropylene (PP)
Polystyrene
Polysulfone
Polytetrafluoroethylene (PTFE)
Polyurethane
Polyvinyl chloride (PVC)
Silicon

NO

Absorptive Materials (Cellulose)

- Wood
- Linen
- Paper
- Sponge

Liquids (Moisture)

Oil

Powders



COMPATIBLE MEDICAL DEVICES - DENTAL



Type	Diamond Bur	Handpiece	Braces Instruments	Dental Kit	Surgical Kit
Size	0.5 – 2.5 mm	4.8 – 9.9 cm	0.5 – 0.7 mm	13 – 15 cm	28 x 17 x 7 cm (W x D x H)
Material	Diamond power, stainless steel	Metal, polymers, PVC, etc.	Metal, nickel titanium, etc.	Tungsten, stainless steel, etc.	Stainless steel, plastic, etc.
Price	€80 - €100	€1,000 - €2,000	€100 - €300	€50 - €100	€1,000

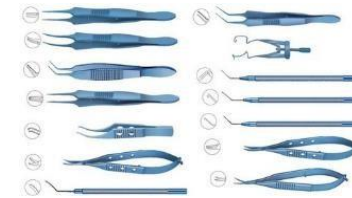
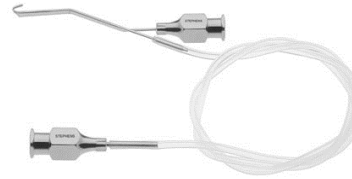
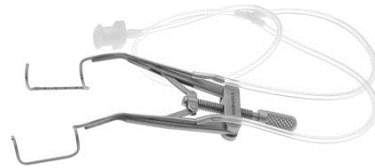


Type	Irrigation Tube	Plastic Tray	Plier	Forceps	Sinus lift Kit
Size	177 – 218 cm	W: 4.8 – 7.6 cm H: 2.8 – 6.8 cm	12.9 – 14.9 cm	15 – 17.8 cm	20 x 12.7 cm (W x H)
Material	Metal, Polypropylene, etc..	Plastic, etc.	Tungsten, stainless steel, etc.	Tungsten, stainless steel, etc.	Stainless steel, etc.
Price	€30 - €60	€0.23 - €0.3	€75 - €150	€37 - €225	€300

COMPATIBLE MEDICAL DEVICES - OPHTHALMOLOGY



Type	LASIK Instruments	LASEK Instruments	Phaco Handpiece	Cataract Surgery Kit	Oculus Biom set
Size	10 – 14 cm	10 – 12 cm	10 -15	254 x 152 x 38 mm (W x D x H)	240 x 245 x 53 mm (W x D x H)
Material	Titanium, Stainless steel, etc.	Titanium, Stainless steel, etc.	Metal, polymers, PVC, etc.	Plastic, stainless steel, etc.	Stainless steel, etc.
Price	€50 - €200/pieces	€50 - €100	€1,000 - €2,500	€50 - €200/pieces	€10,000~ €18,000



Type	Diamond knife	Eye Lid Speculum	Simcoe Cannula	Retina Surgical Kit	Ophthalmic lens
Size	115 - 120 mm	69 - 89 mm	150 – 200 mm	10 – 14 cm	Ø56 X20mm
Material	Stainless steel, Titanium etc.	Stainless steel, etc.	Stainless steel, plastic, etc.	Titanium, Stainless steel, etc.	Glass, plastic, Polycarbonate, etc.
Price	€2000 - €2500	€150 - €200	€100 - €180	€50 - €200/pieces	€600 - €700

COMPATIBLE MEDICAL DEVICES - VETERINARY



Type	Vessel Sealer	Endotracheal Tube	Piezo Scaler Handpiece	Saw Blade	Biopsy Needle
Size	8.9 – 19.8 cm	7 – 9.9 cm	12.7 – 14.9 cm	8 – 33 mm	9 – 15 cm
Material	Plastic, Metal, etc.	PVC, Silicone, etc.	Plastic, Metal, etc.	Stainless steel, etc.	Plastic, Stainless steel, etc.
Price	€700	€50 - €100	€125 - €170	€50 - €70	€17.5 - €49



Type	Arthroscope	Laryngoscope	Hysteroscope	Otoscope	Flexible Endoscope
Size	58 – 160 mm	75 – 215 mm	190 – 364 mm	2.5 – 5 mm	600 – 1,300 mm
Material	Stainless steel, etc.	Stainless steel, etc.	Stainless steel, etc.	Stainless steel, etc.	Stainless steel, etc.
Price	€1,950 - €2,800	€300 - €800	€2,000 - €4,800	€50 - €200	€10,000 - €13,000



EXPlasmaTM

Compact Low Temperature Plasma Sterilizer

*Thank
you!*



www.cubeinst.com

CUBE Instrument Inc.