

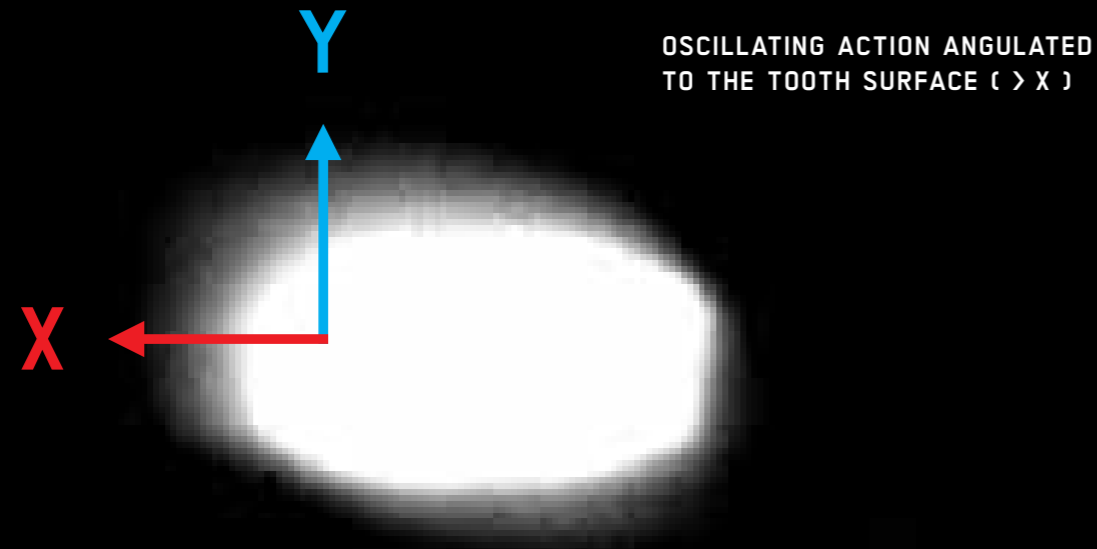
**PIEZON<sup>®</sup>**

**NO**

**PAIN**

**EMS<sup>+</sup>**  
ELECTRO MEDICAL SYSTEMS

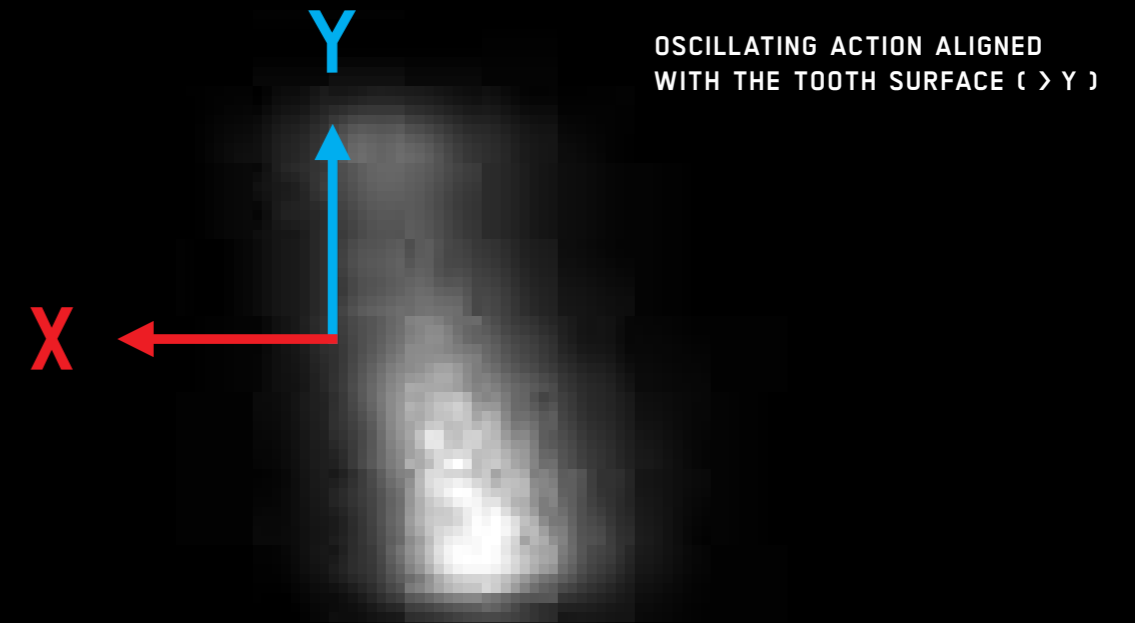
# PAIN



FEAR OF PAIN WHEN BEING TREATED IS THE REASON WHY THREE OUT OF FOUR PERSONS ARE AFRAID OF SEEING THE DENTIST. ONE OUT OF FIVE PUTS OFF THE VISIT UNTIL COMPLICATIONS HAVE SET IN. AND ONE OUT OF TWENTY REFUSES ANY TREATMENT DESPITE SEVERE PAIN

**NO WONDER WHEN PROPHYLAXIS IS ALREADY PAINFUL**

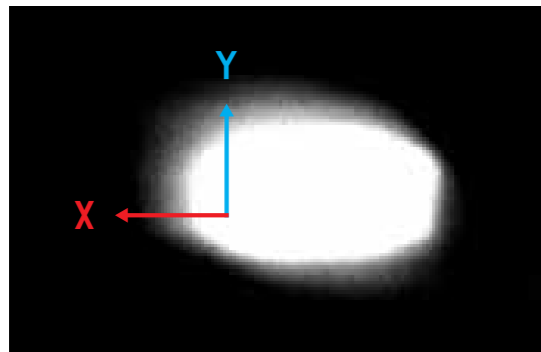
# NO PAIN



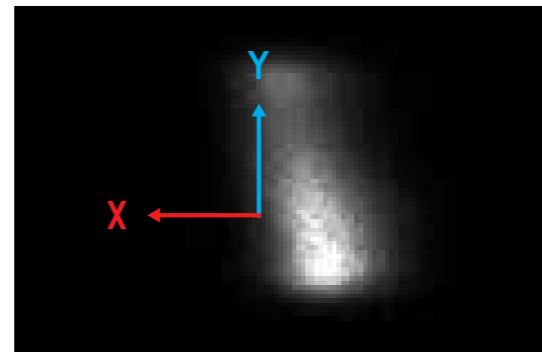
PAINLESS TREATMENT IS THE BEST SOLUTION TO TAKE AWAY THE FEAR OF SEEING A DENTIST. IN THE PAST 20 YEARS THE NUMBER OF PATIENTS GOING FOR A DENTAL CHECK-UP HAS RISEN TO 70 PERCENT. IN OTHER WORDS, THEY WON'T WAIT UNTIL THEY HAVE PROBLEMS

**EVEN BETTER WHEN PROPHYLAXIS IS PRACTICALLY PAINLESS**

# NOW IN BLACK AND WHITE → CLINICAL EVIDENCE FOR THE SUPERIORITY OF THE ORIGINAL PIEZON® METHOD



**UNCONTROLLED** → Other manufacturer – Other instrument – Marked oscillating action angulated to the tooth surface ( $> X$ )



**CONTROLLED** → Original Piezon® Method – EMS Swiss Instruments<sup>PM</sup> – Oscillating action clearly aligned with the tooth surface ( $> Y$ )

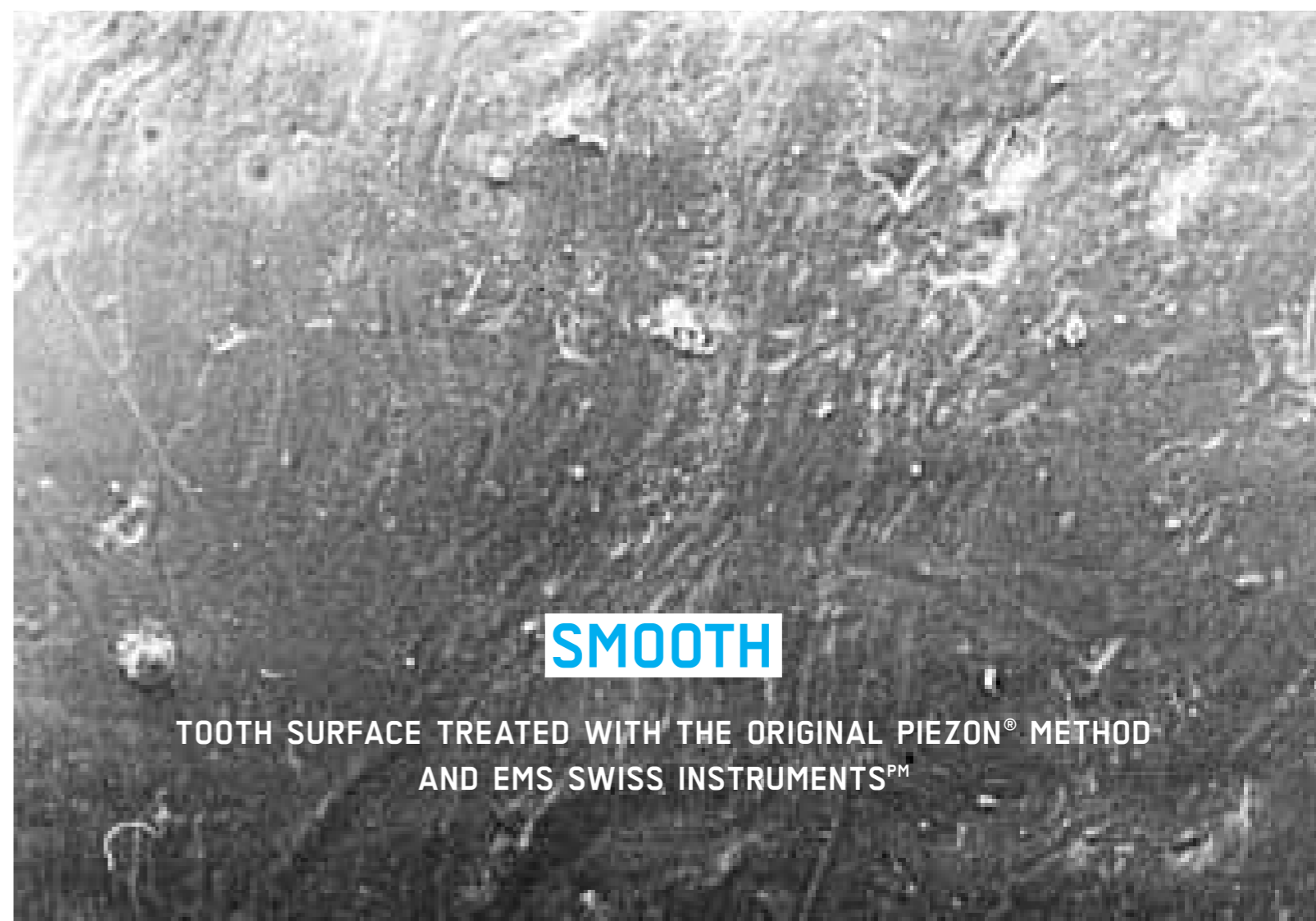
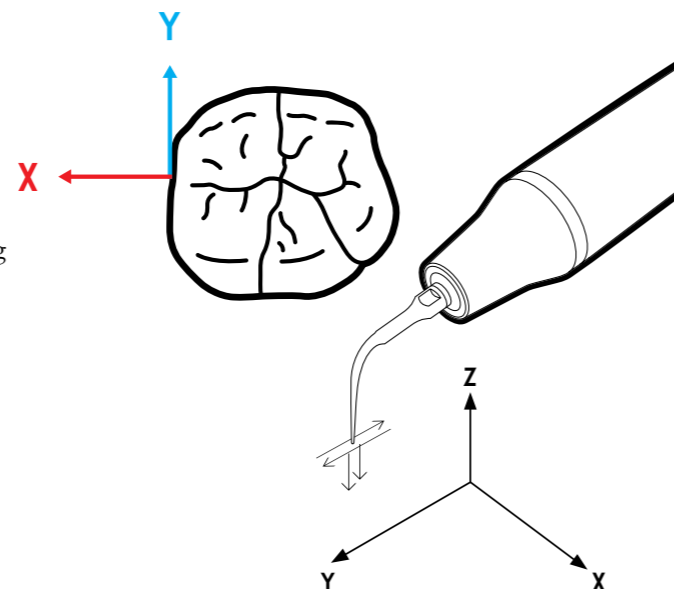
Janner A., Oscillating action of different sonic and ultrasonic tips and recommendations for the clinical application on patients – Dissertation, Ludwig-Maximilians-Universität, Munich, Germany, 2003

Photos (above): Dr. A. Janner

Photos (right): Schmage P., Schultz Y., Platzer U., Maisch S., Nergiz I., University of Hamburg, Germany

## THE ORIGINAL PIEZON® METHOD DELIVERS CONTROLLED OSCILLATING ACTION ALIGNED WITH THE TOOTH SURFACE →

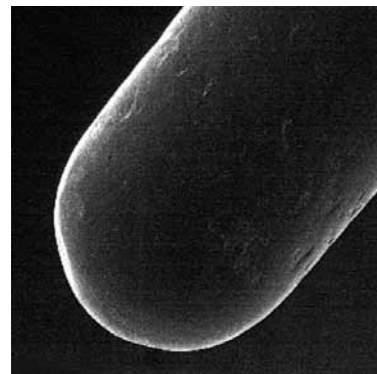
- > Gentle treatment for uniform surface roughness with minimum abrasion of tooth surface
- > Easy to use due to clearly linear oscillating action and intelligent feedback control
- > Efficient delivery due to 32,000 movements per second as well as cavitation and acoustic streaming
- > Maximum retention of the oral gingival epithelium and virtually painless treatment due to optimized instrument movements



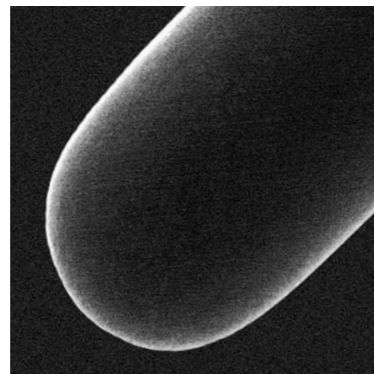


# ORIGINAL AND COPIES →

THE ULTRAFINE SURFACES OF EMS SWISS INSTRUMENTS<sup>PM</sup> SHOW THE DIFFERENCE IN MATERIAL AND MANUFACTURING →



**COPY →**  
Generic ultrasonic device



**ORIGINAL →**  
EMS Swiss Instruments<sup>PM</sup>

- > Premium-quality biocompatible surgical steel
- > Reproducible oscillating action due to highly precise manufacturing
- > Ultrafine instrument surface due to special polishing process for a long life span



**DAMAGED →** Generic ultrasonic instruments overload the sonotrode and severely shorten its life span



**UNDAMAGED →** EMS Swiss Instruments<sup>PM</sup> spare the sonotrode and guarantee years of use

## SONOTRODE OF THE ORIGINAL PIEZON® HANDPIECE MADE OF PREMIUM TITANIUM → A WASTE FOR IMITATIONS

- > As a rule, copies are made of steel that is inappropriate – they have the same effect as a thread cutter and damage the valuable handpiece (loss of warranty!)
- > Original EMS Swiss Instruments<sup>PM</sup> are the result of on-going development with the expertise of the inventor – in perfect harmony with the Original Piezon® Method, from piezoceramic drive and handpiece to instrument tip – perfectly matched



### EMS SWISS INSTRUMENT PS

[> magnified 7 times]

“EMS Perio slim tip had best interproximal and subgingival access”

CRA (Clinical Research Associates) Newsletter, USA

**EMS SWISS INSTRUMENTS<sup>PM</sup> → UNDOUBTEDLY THE WORLD'S MOST COPIED ULTRASONIC INSTRUMENTS**

PIEZON® MASTER 700

PERFECTION

# NEW → PIEZON® MASTER 700

ORIGINAL PIEZON® METHOD  
IN THE LEAD WITH  
PIEZON® NO PAIN TECHNOLOGY



- VERSATILE
- SIMPLE
- HYGIENIC

THE NEW PIEZON®



**NO  
PAIN**



# NO COMPROMISE → COMPLETE

## 1 ORIGINAL PIEZON® HANDPIECE WITH LED

- > Optimum visibility due to circular light emission
- > Lightweight and ergonomic
- > Metal cap for controlled precision
- > Sterilizable up to 135° C
- > Two handpieces for double efficacy

## 2 PIEZON® NO PAIN TECHNOLOGY

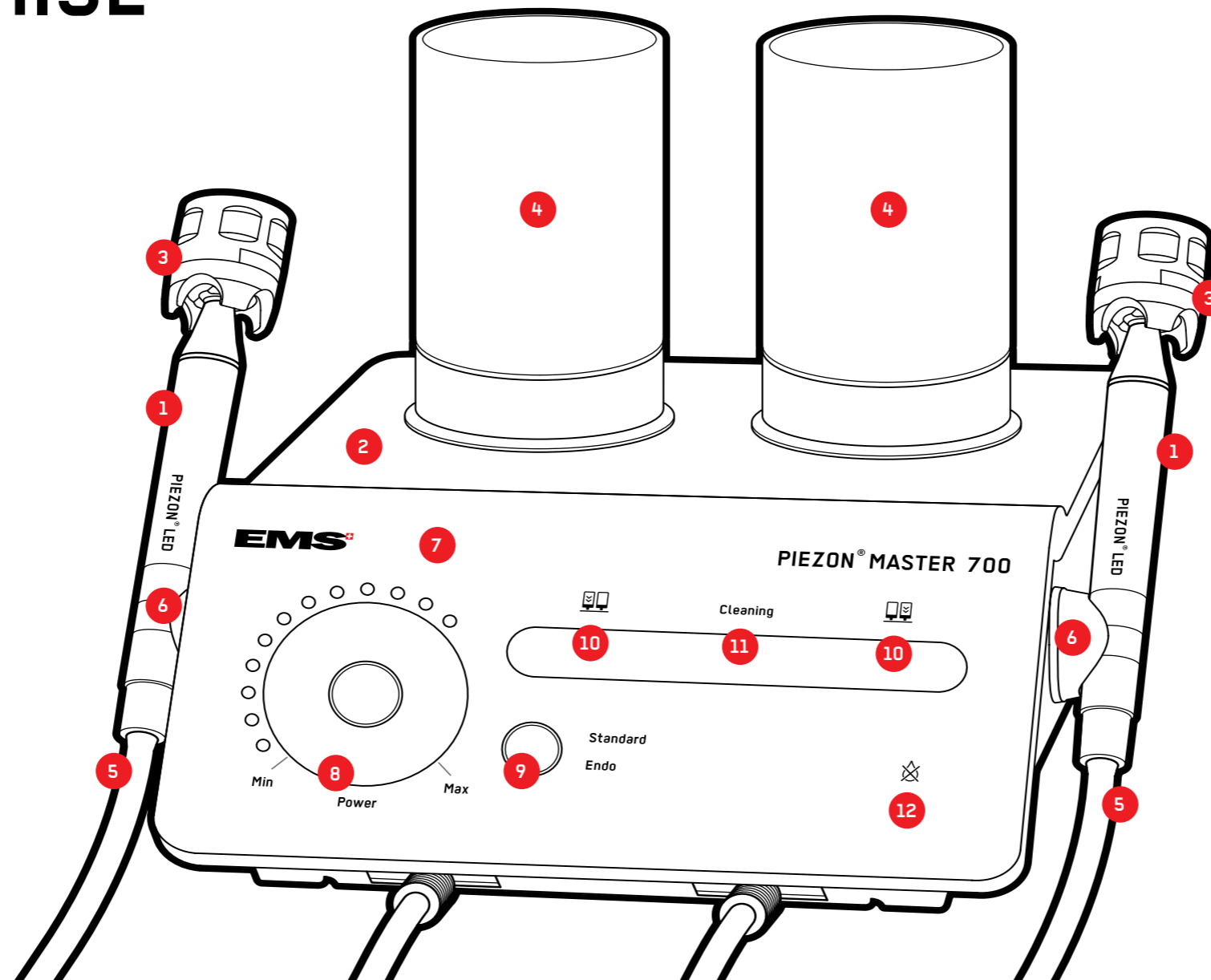
- > Optimum instrument movements
- > Intelligent feedback control
- > Precise treatment results
- > Utmost patient comfort

## 3 EMS SWISS INSTRUMENTS<sup>PM</sup>

- > Each with CombiTorque® for steady handling
- > Broad scope of application
- > Swiss-quality development and manufacturing

## 4 LIQUID CONTAINER

- > Volume 350 or 500ml
- > UV ray-resistant
- > 100ml markings for easy filling
- > Easy to install



## 5 CORD

- > Direct control of flow amount
- > Removable from unit and handpiece
- > Flexible and long-lasting

## 6 INSTRUMENT HOLDER

- > Magnetic, removable

## 7 TOUCH PANEL

- > Fast and precise settings
- > Easy-to-read controls
- > Hygienic

## 8 POWER

- > LED settings in 17 increments for individual clinical requirements
- > Clear and easy to understand

## 9 WORKING MODE

- > Choice of Standard and Endo
- > Automatic memory function

## 10 BOTTLE SELECT

- > Easy switching between two solutions
- > Selected bottle lights up

## 11 CLEANING MODE

- > Automatic
- > Cleaning progress display

## 12 DRY WORK CONTROL LED

- > Illuminates when used without liquid



### PRACTICAL

- > Connecting cord for operating two EMS units with one foot control



### CONTROLLED

- > Multifunctional foot control for controlled work with integrated boost function



### RELIABLE

- > CombiTorque® for safe, hygienic exchange and storage of EMS Swiss Instruments<sup>PM</sup>



### FLEXIBLE

- > Magnetic instrument holder for all metal surfaces



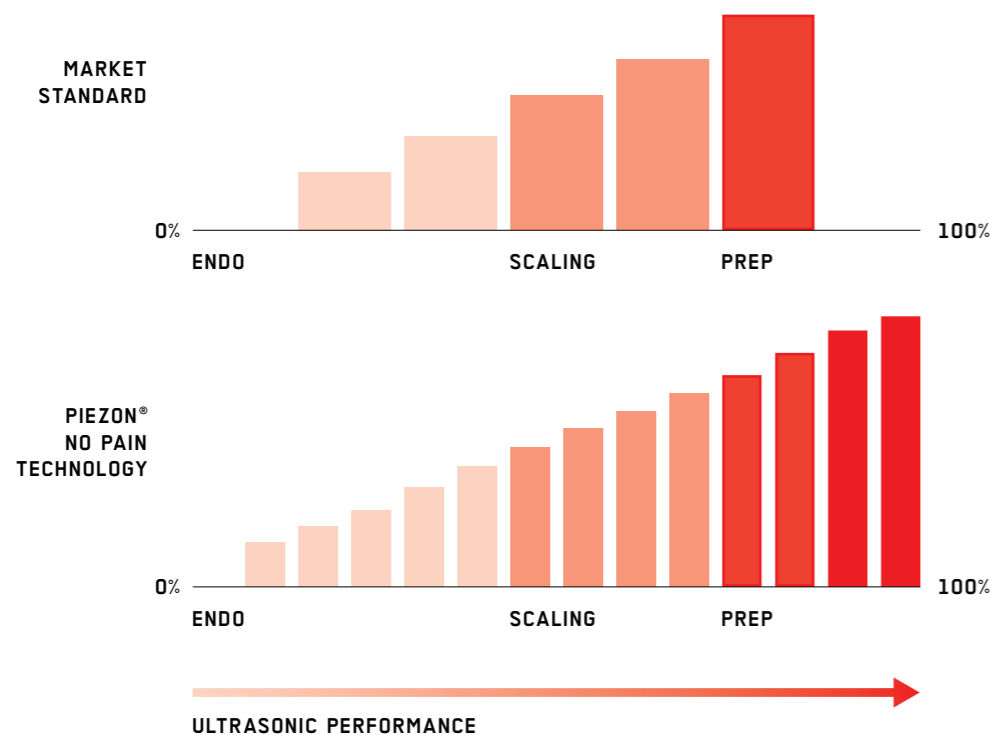
### MOBILE

- > CART with embedded power supply lead

# PIEZON® NO PAIN TECHNOLOGY → EMS SWISS INSTRUMENTS<sup>PM</sup>

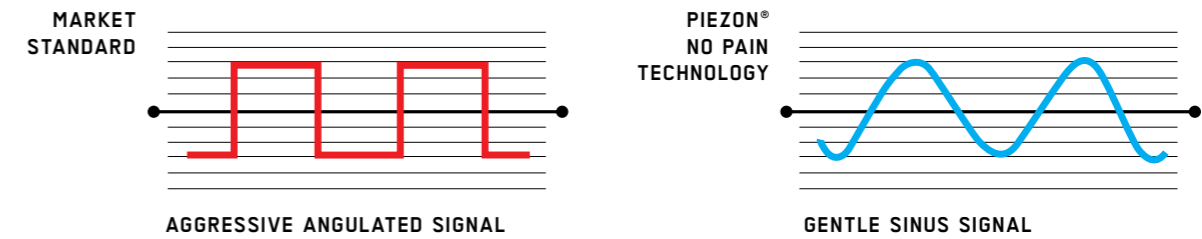
A MIX OF INTELLIGENT TECHNOLOGY AND UNEQUALED PRECISION MAKES THE DIFFERENCE

DIFFERENTIATED POWER → MULTIPLE TREATMENT APPLICATIONS



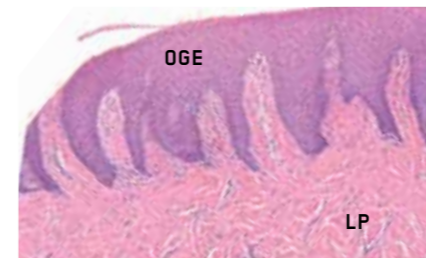
- > Gentle and comfortable for endo applications
- > Intelligent power output feedback control
- > More power for restorative procedures
- > Optimum instrument control and efficiency in all applications

UNIFORM POWER OUTPUT → PLEASANT TREATMENT



- > No irritation due to aggressive power output or noise
- > Almost no pain sensation due to gentle sinus signal of Piezon® No Pain technology

OPTIMUM INSTRUMENT MOVEMENTS → UNDAMAGED EPITHELIUM



Negative control specimen\* → **BIOPSY SCORE 1**



Epithelium following treatment with Piezon® Master 700 and EMS Instrument PS → **BIOPSY SCORE 1**



Epithelium following treatment with hand instrumentation\* → **BIOPSY SCORE 4**

- > No lesion of the oral gingival epithelium and largely painless treatment thanks to optimum linear instrument movements between tooth and epithelium

**BIOPSY SCORES**

- 1 NO LESION**
- 2 MINOR LESION** *Basement membrane intact*
- 3 MEDIUM LESION** *Basement membrane damaged*
- 4 SEVERE LESION** *Basement membrane destroyed*

OGE = ORAL GINGIVAL EPITHELIUM  
LP = LAMINA PROPRIA

\* Petersilka G., Faggion Jr. C.M., Stratmann U., Gerss J., Ehmke B., Haerberlein I., Flemmig T.F. – Journal of Clinical Periodontology (Issue 4, 2008)

**PIEZON® MASTER 700**

COMFORT

**PIEZON® NO PAIN TECHNOLOGY MATCHED TO ORIGINAL PIEZON® HANDPIECE LED AND EMS SWISS INSTRUMENTS™  
→UTMOST PATIENT COMFORT**



> Piezon® No Pain module – integrated in the new Piezon® Master 700



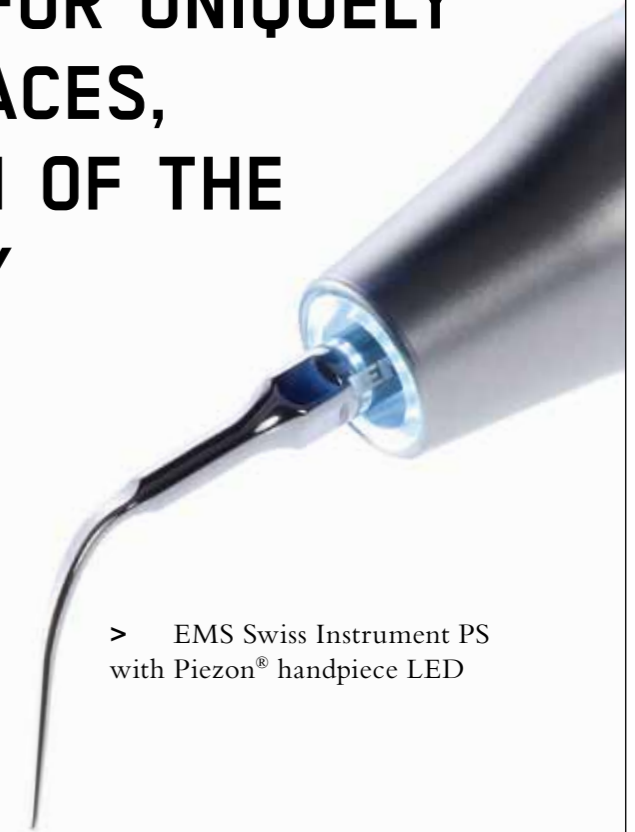
> Original Piezon® handpiece LED – circular light emission



> EMS Swiss Instruments™ – genuine only with laser-etched EMS logo

**LINEAR OSCILLATING ACTION ALIGNED WITH THE TOOTH SURFACE AND DELIVERED BY UNIQUE EMS SWISS INSTRUMENTS™ COMBINES WITH THE SINUSOIDAL POWER OUTPUT OF INTELLIGENT PIEZON® NO PAIN TECHNOLOGY PERFECTLY MATCHED TO THE ORIGINAL PIEZON® HANDPIECE FOR UNPARALLELED PRECISION →**

**THE RIGHT FORMULA FOR UNIQUELY SMOOTH TOOTH SURFACES, MAXIMUM PROTECTION OF THE GUMS AND VIRTUALLY PAINLESS TREATMENT**



> EMS Swiss Instrument PS with Piezon® handpiece LED

**ANTI-PAIN FORMULA**





**FEELING BETTER AND IT SHOWS →**  
FOLLOWING TREATMENT WITH THE ORIGINAL PIEZON® METHOD,  
PATIENTS FEEL SIGNIFICANTLY BETTER WEEK AFTER WEEK

Patient survey following treatment with the Original Piezon® Method versus patients treated with  
curettes and other instruments

Randomized clinical study: Aslund M., Suvan J., Moles D. R., D'Aiuto F., Tonetti M. S.

# MANY ARE OUT OF LINE → BUT NOT THE ORIGINAL PIEZON® METHOD

## WHEN INSTRUMENTS ARE OUT OF STEP →

- > Random instrument movements in the form of eights, double eights or twisted curves hit the tooth and gingival surfaces in an uncontrolled fashion. It is not difficult to imagine that such movements cause considerable pain to the patient
- > Anesthesia is often the only method of choice to protect the patient from the painful side effects of plaque removal. As a rule with the unpleasant effect to have to endure the brief but sharp pain of the injection needle and several hours of local numbness
- > Yes, there are manufacturers who will sell the treatment unit with an anesthetic package. The message is clear: this will hurt. Not exactly what's needed to achieve greater recall success

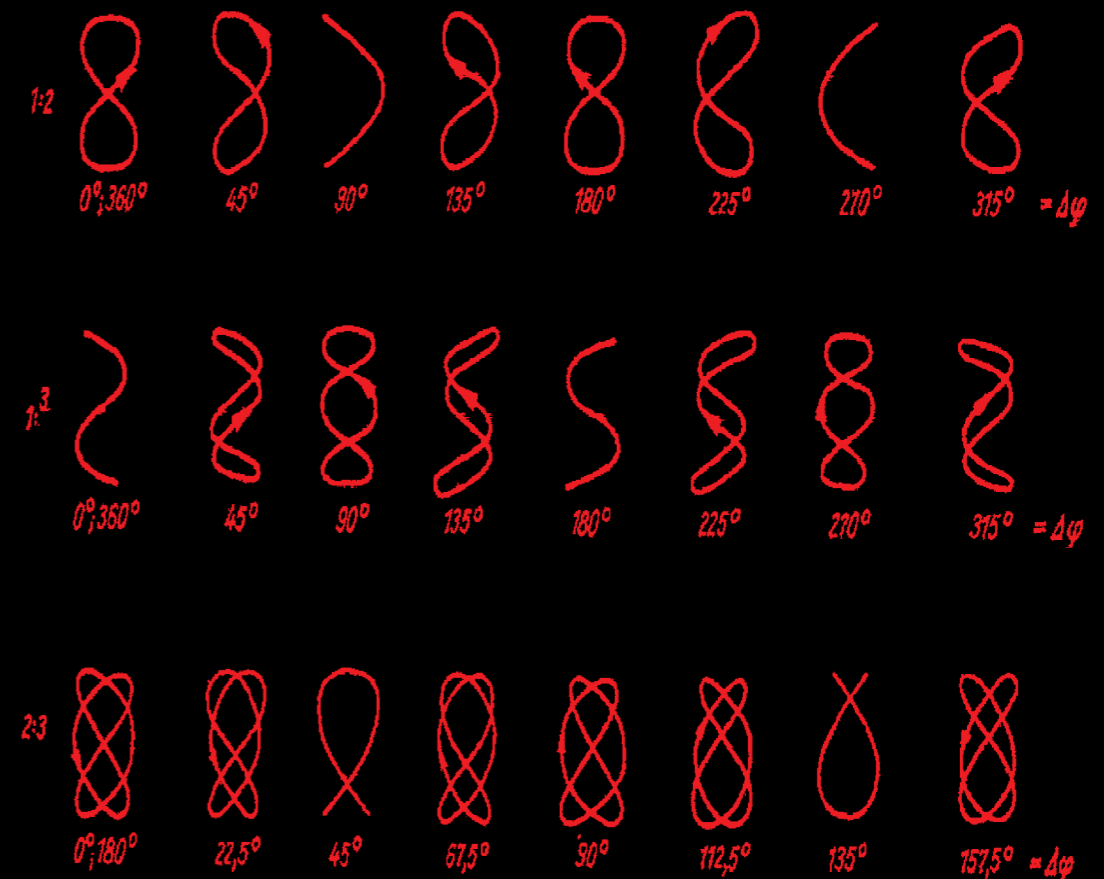
## WHEN INSTRUMENTS KNOW HOW TO MOVE →

- > Precisely predetermined instrument movements oscillate in a controlled manner between the tooth and gums. The connecting tissue is protected from injury or destruction, the embedded nerves remain untouched and the patient hardly feels any discomfort
- > The Original Piezon® Method is a truly effective and largely painless way to remove plaque. The patient experiences the treatment as extremely pleasant, is motivated for regular recall visits, and readily refers the practice to others

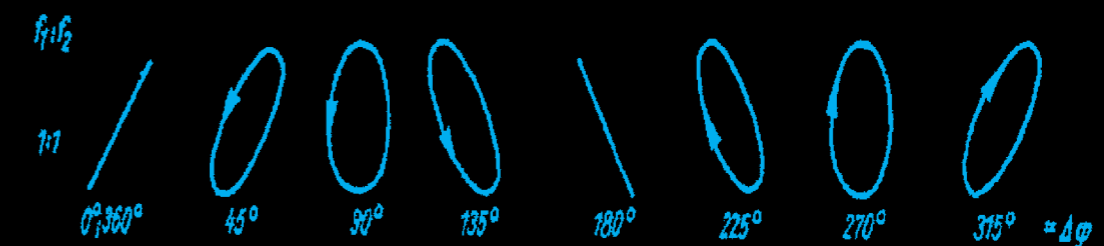
**EARN THE ENTHUSIASM  
OF YOUR PATIENTS**

## DANCE OF THE INSTRUMENTS

### MOVEMENTS THAT CAUSE PAIN



### MOVEMENTS THAT ARE COMFORTABLE



EMS-SWISSQUALITY.COM

#### LISSAJOUS FIGURES

- > Circles, ellipses, eights, double eights and twisted curves – named after mathematician J.A. Lissajous



**EMS-SWISSQUALITY.COM**

EMS  
ELECTRO MEDICAL SYSTEMS SA  
Chemin de la Vuarpillière 31  
CH-1260 Nyon

Tel. +41 22 99 44 700  
Fax +41 22 99 44 701  
welcome@ems-ch.com  
www.ems-dent.com