TREATMENT

RECOMMENDATIONS







EDITION 2025

PIEZON LED



AIRFLOW MAX

THE ONLY TOOLS













CHECK FOR MORE INFORMATION







AIRFLOW

BIOFILM

EMS⁸

PERIOFLOW MAX

AIM OF THIS DOCUMENT

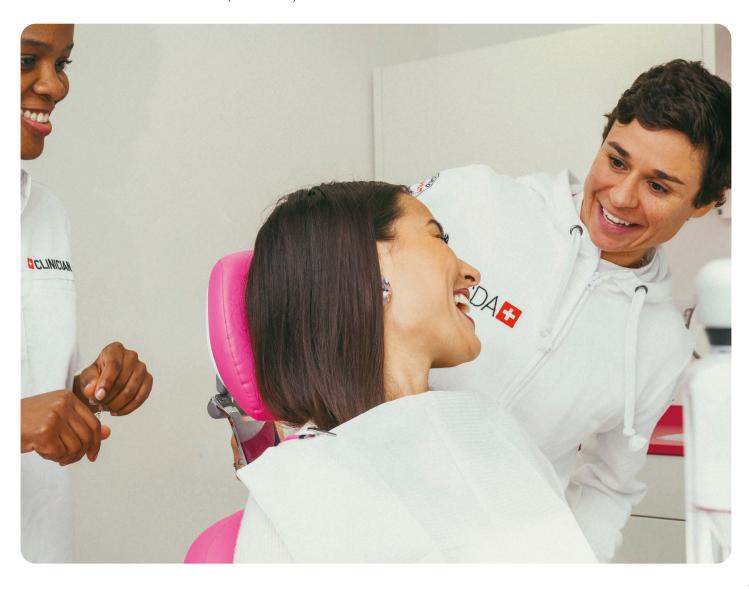
This document provides guidelines for optimal Guided Biofilm Therapy (GBT) treatment with the new GBT Machine. It enables clinicians to ensure a simplified workflow, enhancing both the clinician and patient experience with the highest level of efficiency, safety, and comfort during biofilm and calculus management as well as stain removal. The connectivity feature helps clinicians and practices to maintain clear visibility and full control at all times.

The treatment recommendations support the clinicians in optimizing ergonomics while performing GBT in the most intuitive manner and facilitating the highest level of patient compliance. In addition, it provides a structured approach that is both economical and sustainable.

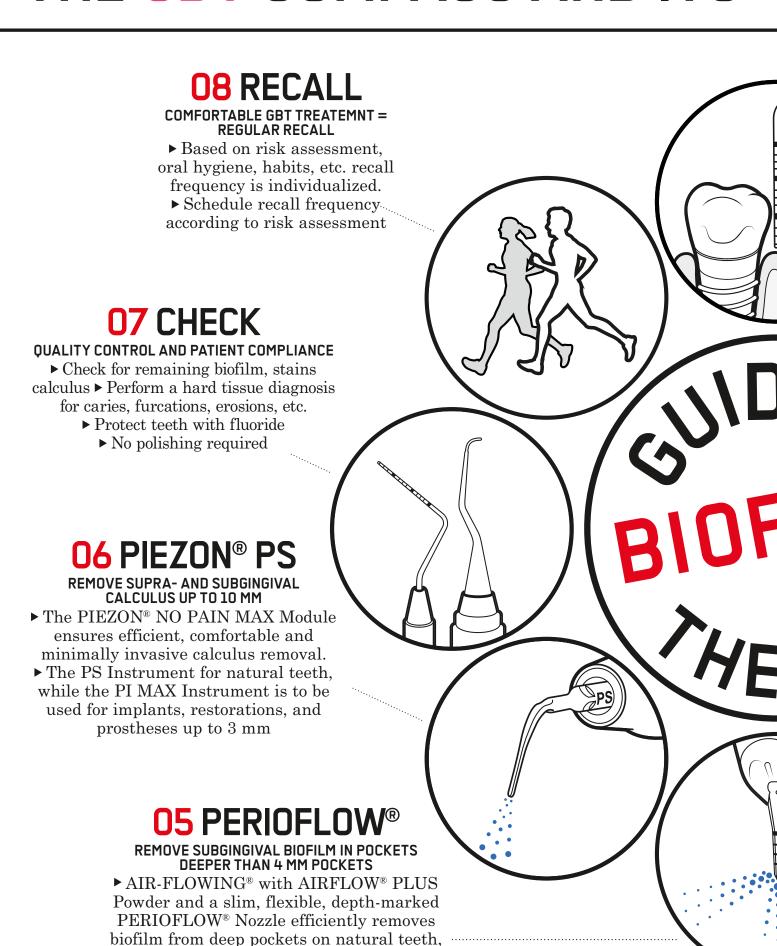
GBT is an evidence-based, indication-oriented, systematic, and modular protocol for prevention, prophylaxis, therapy, and maintenance.

The Swiss Dental Academy (SDA), the educational branch of EMS, follows the guidelines of the EFP (European Federation of Periodontology) where equal importance is given to education on professional teeth cleaning and oral hygiene practices at home. SDA trains dental professionals in the use of the GBT Machine through dedicated hand-on sessions to provide state-of-the-art treatment, ensuring optimal oral health and hygiene for patients.

See the Instruction for use (FB-1022) for more informations.



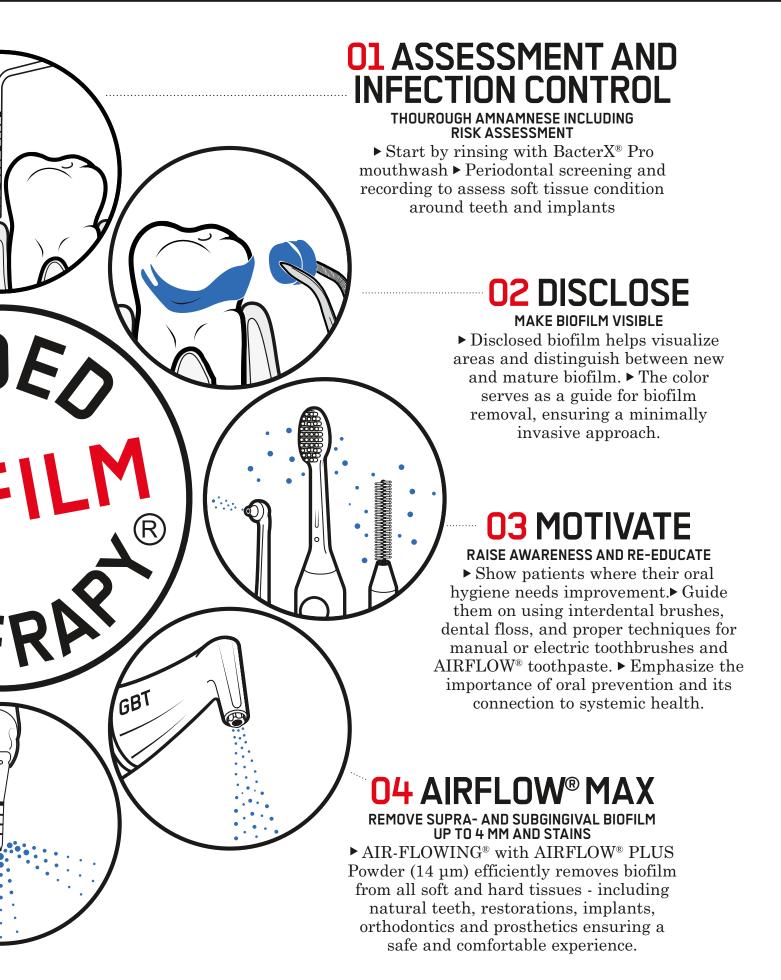
THE GBT COMPASS AND ITS



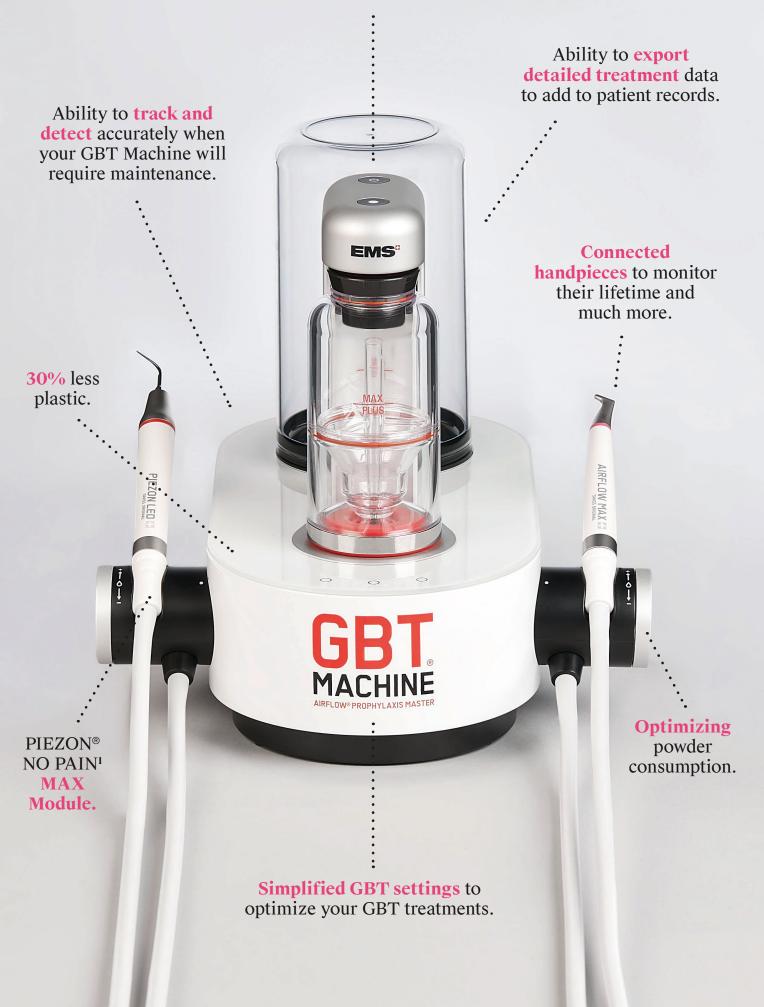
root furcations and implants – ensuring safe, comfortable and effective treatment.

8-STEP PROTOCOL





Receive insights into optimal device settings to improve efficiency, enhance the patient experience and reduce powder consumption.



PREPARATION

DENTAL PROFESSIONAL

Protect yourself with a face mask (bacterial filtration efficiency, BFE 96%), dental loupes and gloves.







DENTAL PRACTICE

Fill the AIRFLOW® PLUS Powder chamber of the GBT Machine® to the maximal indicated limit with AIRFLOW® PLUS Powder. Prepare the EMS Biofilm Discloser, salivary ejector, VISIGATE, AIRFOAM, PERIOFLOW® Nozzles if needed and sterilized Instrument set kit containing:

- 1. MOUTH MIRROR
- 2. PERIODONTAL PROBE
- 3. EXPLORER
- 4. TWEEZERS
- 5. GBT FLOWCONTROL®
- 6. AIRFLOW® MAX HANDPIECE
- 7. PERIOFLOW® MAX HANDPIECE
- 8. PIEZON® HANDPIECE
- 9. PIEZON® PS INSTRUMENT/PI MAX INSTRUMENT

PATIENT

BACTERX® PRO, eyeglasses, patient drape.

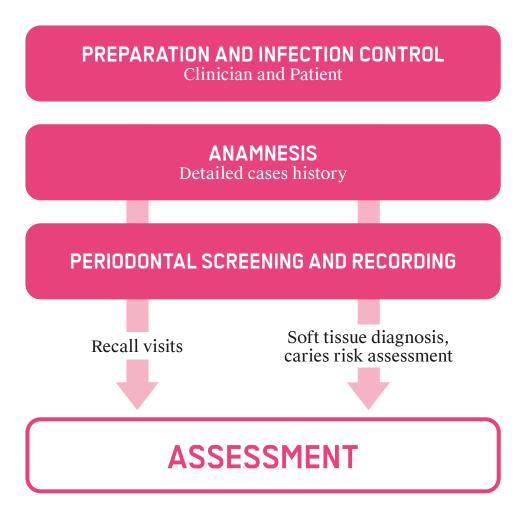


01 ASSESSMENT AND

MEDICAL AND DENTAL CASE HISTORY

- ▶ Assessment is the initial step in the Guided Biofilm Therapy (GBT) protocol, commonly referred to as anamnesis, which involves a comprehensive evaluation. This includes analysing the risk of caries and periodontal disease, as well as documenting a detailed dental and medical case history that covers medication history and patient habits.
- ▶ It is essential to ask patients specific questions about allergies and sensitivities to substances such as iodine, CPC/CHX, and common flavors or aromas like mint, cherry, and lemon. Also important are erythritol and xylitol. Additionally, there are special considerations where clinicians must use their own discretion or consent from the physician, see the FB-1022.
- ► Ask your patient to pre-rinse or gargle for 40 seconds with mouth rinse e.g. BACTERX® PRO¹.
- ▶ A thorough periodontal/peri-implant screening and recording is mandatory to plan the treatment: 6-point pocket charting, bleeding on probing, color, contour consistency of the gingiva should be assessed.





^{1.} Inactivation of SARS-CoV-2 through treatment with the mouth rinsing solutions ViruProX® and BacterX® pro. Julia Koch-Heier, Helen Hoffmann, Michael Schindler, Adrian Lussi, Oliver Planz https://pubmed.ncbi.nlm.nih.gov/33802603/

INFECTION CONTROL

▶ Risk assessment protocols are an addition to treatment planning, allowing diagnosis based on relative risk of oral disease and not just the presence of actual disease.

Choose and fill out the correct caries risk assessment documents for your patients¹.

CARIES RISK ASSESSMENT



For children 0 - 6 years of age



For children ≥ 6 years of age



For adults

The aim of oral health assessment and review is to facilitate the move from a restorative to a preventive and long-term approach that is risk-based and meets the specific needs of individual patients. The information gathered from this step forms the basis of discussion with patients on their oral health. It also facilitates the discussion during the motivation step.



PROBE AND SCREEN EVERY

▶ Probing and screening is the cornerstone to discuss long-term oral health status with the patient. Unless the depth is measured, the treatment can not be started.

Assessment of the soft tissues guides us to the next step of the GBT protocol.

The below gives an overview on the instrumentation to be used for different clinical scenarios.







AIRFLOW® MAX PERIOFLOW® MAX SUPRA- AND SUBGIN-

GIVAL UP TO 4MM

SUBGINGIVAL **DEEPER THAN 4MM**

PIEZON® PS

SUPRA- AND SUBGINGIVAL UP TO 10 MM

ON NATURAL TEETH





HEALTHY

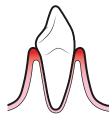
► HEALTHY GINGIVA ► NO BLEEDING **ON PROBING**





IF CALCULUS





GINGIVITIS

► SHALLOW POCKET ► NO BONE LOSS ► BLEEDING ON PROBING



4 mm

NOT NEEDED



IF CALCULUS





PERIODONTITIS

► DEEP POCKET **▶ BONE LOSS**

▶ BLEEDING ON PROBING

► NO SUPPURATION







10 mm





SUPPURATING

► PERIODONTITIS

▶ BONE LOSS

► BLEEDING ON PROBING **► SUPPURATION**

SUPRA





CLINICAL CASE

Probing around implants should be done at every appointment. We can use either a metal probe or a plastic probe to assess the probing depths.







ON IMPLANTS

AIRFLOW® MAX PERIOFLOW® MAX PIEZON® PI MAX SUPRA- AND SUBGIN-GIVAL UP TO 4MM

SUBGINGIVAL DEEPER THAN 4MM

SUPRA- AND SUB-GINGIVAL UP TO 3 MM





HEALTHY

► NO BONE LOSS ► HEALTHY GINGIVA ► NO BLEEDING ON PROBING ► NO SUPPURATION



4 mm







MUCOSITIS

► NO BONE LOSS ► BLEEDING ON PROBING **► NO SUPPURATION**



4 mm



IF CALCULUS





PERI-IMPLANTITIS

► BONE LOSS ► BLEEDING ON PROBING ► NO SUPPURATION





IF CALCULUS





SUPPURATING PERI-IMPLANTITIS

▶ BONE LOSS ► BLEEDING ON PROBING **► SUPPURATION**



ONLY SUPRA





IF CALCULUS

02 DISCLOSE

- ▶ Disclosing biofilm is a crucial step in Guided Biofilm Therapy (GBT) to visualize supragingival biofilm, which is typically invisible to the naked eye.
- ▶ The two-tone EMS Biofilm Discloser consists of the following ingredients: water (aqua), glycerin, ethyl paraben, flavoring (aroma), N-cetylpyridinium chloride, erythrosine, and patent blue.
- ▶ This product contains 250 pre-soaked pellets, for individual, convenient use.

GOAL

► To make all supragingival biofilm visible to assure minimally invasive treatment and complete biofilm removal.

ADVANTAGES FOR THE PATIENT

- ▶ Motivation, re-education on oral hygiene
- ▶ Understanding the need for professional prophylaxis
- ▶ Personalized patient instruction and motivation
- ▶ Self-evaluation by the patient
- ► Effectiveness of oral hygiene maintenance

ADVANTAGES FOR THE CLINICIAN

- ▶ Visualizing the dental biofilm
- ► The color guides the biofilm removal
- ► Take plaque indices





ACTIVATE THE PEDAL and begin rinsing with AIRFLOW® MAX

DISCLOSED BIOFILM

EMS Biofilm Discloser is safe to use in all age groups as well as in all clinical applications, e.g. around teeth, implants, restorations, prosthetics and orthodontic appliances. Follow instructions for use carefully to rule out any contraindication.

RECOMMENDATIONS

- 1. Ensure that the GBT VISIGATE® is in place.
- 2. Take one pellet with tweezers and apply it to all surfaces of the teeth including buccal, lingual, palatal, occlusal and interdental.
- 3. After disclosing remove excess biofilm discloser with the intuitive feature of the new GBT Machine with **AIRFLOW® MAX and the water only mode**; automatically set to level 2 GBT Setting.





HOW TO USE WATER ONLY MODE

- ► Ensure chamber is unpressurised | picking up the AIRFLOW® MAX handpiece with the chamber unpressurised will automatically be 'water only' mode.
- ▶ Pick up AIRFLOW® MAX handpiece.
- ▶ Press pedal.
- ▶ Begin rinsing disclosing solution.



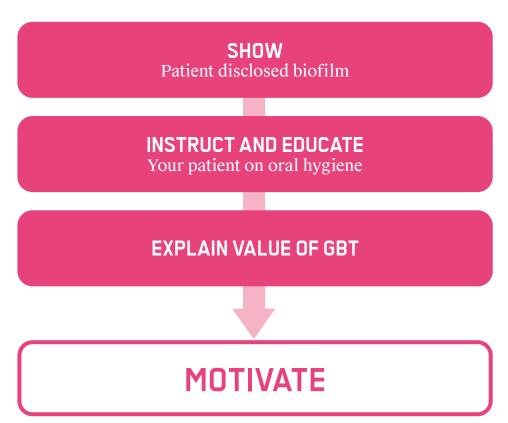


03 MOTIVATE

MOTIVATION IS THE CORNERSTONE AND FORMS THE BASIS FOR TRUST AND PATIENT COMPLIANCE IN ORDER TO ACHIEVE OPTIMAL LIFETIME ORAL HEALTH.

Successful, long-term oral health is not only based on professional teeth cleaning through GBT but, more importantly, on daily home care. Reeducate and instruct your patients on oral hygiene. Emphasize the importance of prevention. Discuss any habits like smoking, etc. Diet counselling may be necessary at this point. Show the patient areas where improvement in oral hygiene is needed, tell them what to do and, finally, work with them on using individualized interdental aids or flossing, where needed.





GBT TOOTHPASTE

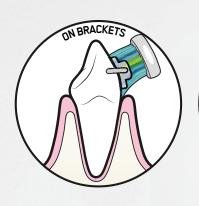
THE FIRST ERYTHRITOL-BASED TOOTHPASTE

Compared to sorbitol and xylitol, erythritol is known to inhibit the growth of biofilm and to reduce caries and plaque.

The high amount of free fluoride contained in AIRFLOW® toothpaste reinforces its anti-cariogenic effect*.



- ► ERYTHRITOL- BASED AIRFLOW® TOOTHPASTE
- ► LOW ABRASIVITY FOR SMOOTH AND EFFICIENT DAILY HOME CARE
- NO SLS** OR PARABENS
- ► IDEAL FOR SENSITIVE PATIENTS



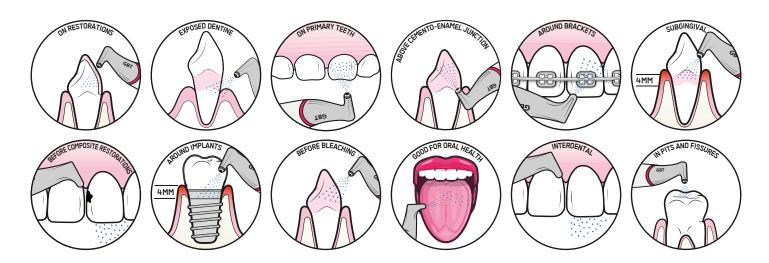


AIR-FLOWING®

- ▶ AIR-FLOWING® is the synergy of the new GBT Machine®, the respective handpieces AIRFLOW® MAX as well as PERIOFLOW® MAX and the erythritol- based AIRFLOW® PLUS powder.
- ▶ Only AIR-FLOWING® works with the patented Laminar AIRFLOW® Technology (LAT) allowing a constant and regulated flow of the AIRFLOW® PLUS Powder. This makes biofilm management during Guided Biofilm Therapy (GBT) more predictable, safe, efficient, comfortable and economical.
- ► AIR-FLOWING® is an integral part of the Guided Biofilm Therapy protocol.



APPLICATIONS



TEETH

► Primary and secondary teeth

DENTAL HARD TISSUES

- ► Enamel
- ▶ Dentin
- ► Cementum

ORAL SOFT TISSUES

► Supra- and subgingival pockets up to 9mm

IMPLANTS

- ▶ Peri-implant sulcus
- ▶ Deep peri-implant pockets

RESTORATIONS AND PROSTHETICS

- ▶ Restorations
- ▶ Prosthetics
- **▶** Dentures

ORTHODONTICS

- ▶ Orthodontic brackets
- ► Aligners
- ► All parts of the orthodontic appliance

REMOVE BIOFILM BEFORE

- ► Caries diagnosis
- ► Fluoride treatment
- ► Orthodontic treatment
- ► Restorative and prosthetic treatment
- ▶ Bleaching procedures





AIRFLOW PROPHYLAXIS

14µm ERYTHRITOL POWDER
SUB + SUPRAGINGIVAL





CONTAINS

Erythritol, CPC or CHX, amorphous silica. Size: 14 µm

The original AIRFLOW® PLUS Powder is available in a high-quality aluminum bottle (400 grams) for greater sustainability. When empty, give it to your patient or recycle it to be eco-friendly.

04 AIRFLOW® MAX

AIRFLOW® - THE ORIGINAL EMS TECHNOLOGY

The original AIRFLOW® MAX handpiece with its guided Laminar AIRFLOW® Technology is a brilliant innovation from the EMS Research Center.

GOAL

▶ To remove oral biofilm in a safe, minimally invasive, predictable and comfortable way. Once the disclosed biofilm is removed completely, there is no need to clean any further. This assures minimally invasive treatment.

ADVANTAGES FOR THE PATIENT

- ► Safe: on tissues, restorations, prostheses, implant and orthodontic appliances.
- ▶ Minimally invasive.
- ▶ Comfortable.

ADVANTAGES FOR THE CLINICIAN

- ▶ Simplified workflow: intuitive settings, efficient biofilm removal time-saving
- ► Connectivity: clear visibility and follow-up of treatments.
- ▶ Better ergonomics: with 8+ hours of daily work
- ▶ Predictable biofilm removal: improves trust and patient compliance
- ▶ Economical: lower powder consumption



RECOMMENDATIONS FOR USE

ANGLE

- ▶ Range of usage is between 15°- 80°.
- ▶ Continuously adjust the angle while working.
- ► Avoid using the AIRFLOW® MAX Handpiece at 90°.

DISTANCE

- ▶ General rule for AIRFLOW® MAX: work closer!
- ▶ Keep the handpiece at 2 to 5mm during treatment.
- ▶ In case of heavy stains, keep the handpiece at maximum 2mm.

MOVEMENT

- ▶ Make continuous semi-circular movements.
- ▶ Create small 'Smileys' from mesial to distal.
- ▶ Never hold the handpiece stationary!



- ► **GBT:** OPTIMAL default setting
- ▶ Low: Children, very sensitive or patients on regular recall, light biofilm
- ► **High:** Heavy stain

BOOST

- ▶ The boost function can be activated by pressing the wireless pedal in the centre
- ▶ The light will flash (it is proportionate to the setting they are currently on)



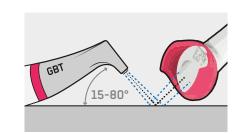




DEFAULT WATER SETTING FOR AIRFLOW® IS MIDDLE SETTING

CLINICIANS MUST USE THEIR OWN DISCRETION OR CONSENT FROM THE PHYSICIAN.

► See the Instruction for use (FB-1022) for more informations.



05 PERIOFLOW® MAX

GOAL

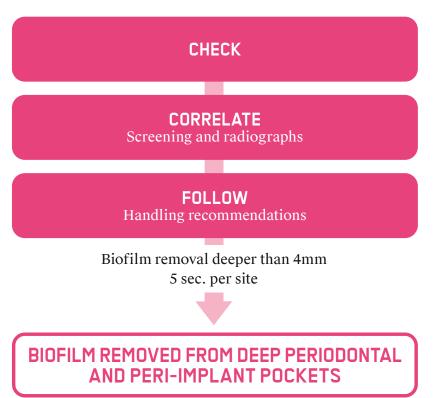
▶ Remove biofilm from periodontal and peri-implant pockets safely, minimally invasively, predictably and comfortably at probing depths greater than 4mm during periodontal and peri-implant therapy, whether supportive or non-surgical.

ADVANTAGES FOR THE PATIENT

- ► The new design reduces intra-pocket pressure.
- ▶ Minimally invasive: no change on root or implant surfaces.
- ▶ Comfortable: no need for anesthesia.

ADVANTAGES FOR THE CLINICIAN

- ▶ Simplified workflow: intuitive settings, efficient, gentle biofilm removal
- ► Connectivity: clear visibility and follow-up of treatments.
- ▶ Better ergonomics.
- ▶ Predictable biofilm removal: greater accessibility to reach deeper periodontal and periimplant areas.



REMOVE THE NOZZLE

▶ Use the PIEZON® Check tool.



RECOMMENDATIONS FOR USE

- ▶ ONLY use AIRFLOW® PLUS or PERIO Powder.
- ► Correlate clinical probing depth with radiographs.
- ▶ PERIOFLOW® Nozzle is disposable/single use per patient
- ▶ Insert the Nozzle up to the depth of the pocket.
- ► Start with vertical, overlapping repetitive movements as you come out of the pocket.
- ▶ Natural tooth: site specific usage, implant: minimum 6 sites to be treated.
- ▶ Never push the Nozzle into the pocket even if the probing depths are more than 4mm.
- ▶ Use min 5secs per site
- ▶ If treating multiple sites in 1 patient, check that the tip is not bent and the quality has not changed.
- ▶ After 20 sites, use a new Nozzle.
- ▶ Use your finger and thumb to compress the site.



POWER AND WATER SETTINGS

- ▶ A NEW Radio Frequency Identification (RFID) handpiece has been developed.
- ▶ If the clinician is using the SWISS ORIGINAL PERIOFLOW® Handpiece (with RFID*), it will recognise the PERIOFLOW® Handpiece, and the default GBT setting will be adjusted to reflect the correct setting for PERIOFLOW®.
- ▶ If the clinician uses the old PERIOFLOW® Handpiece, there is no RFID. Therefore, the device is unable to detect the change from AIRFLOW® to PERIOFLOW®. The clinician will need to select the high setting to have the correct PERIOFLOW® setting.

BOOST

▶ The PERIOFLOW® MAX handpiece does not have a boost function.



CONTRAINDICATIONS*

▶ See the Instruction for use (FB-1022) for more informations.

RISK OF EMPHYSEMA

▶ Subcutaneous emphysema occurs as a result of an abnormal introduction or presence of air or gas into tissue or tissue spaces. It has been recognized and documented as a complicating factor for any dental procedure using pressurized air.

Read more about clinical signs and what to do in case of emphysema.

06 PIEZON® PS

PIEZON® NO PAIN TECHNOLOGY IS TO BE USED AFTER AIR-FLOWING® IN ORDER TO REMOVE THE NOW VISIBLE CALCULUS SUPRA- AND SUBGINGIVALLY.

GOAL

To remove supra- and subgingival calculus in a safe, efficient, minimally invasive, predictable and highly comfortable way with linear movement and dynamic power regulation.

ADVANTAGES FOR THE PATIENT

Safe and preserves the natural integrity of teeth, restorations, prostheses, implants and orthodontic appliances. Minimally invasive. Highly comfortable.

ADVANTAGES FOR THE CLINICIAN

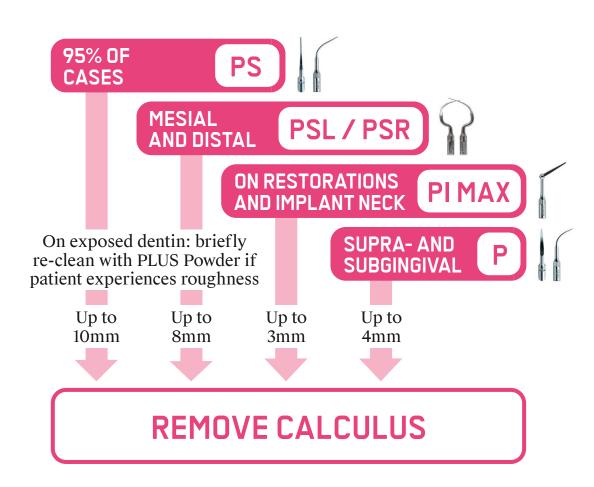
Slim design with optimal accessibility.

Similar tactile sensation to a probe to detect calculus in subgingival areas.

Intuitive automatic power regulation making GBT treatments highly efficient.

Predictable calculus removal with precision.

Optimal ergonomics.



RECOMMENDATIONS FOR USE

ADAPTATION

► Hold the original PIEZON® PS Instrument parallel to the tooth, adapting the lateral side of the Instrument.

ANGULATION

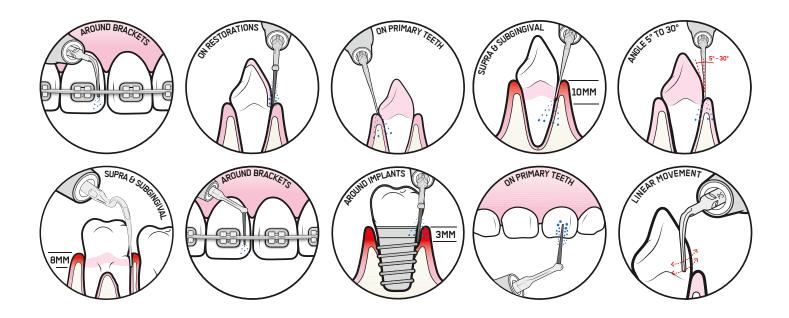
- ► Angulate the instrument with a slight tangent (5° 30°).
- ▶ Only the last 1-2 mm should be in contact with the tooth.

PRESSURE

▶ Let the instrument work effortlessly, apply no pressure.

MOVEMENT

- ▶ Make small back-and-forth strokes after you encounter calculus.
- ▶ Never use the tip, front or back of the Instrument.



SPECIFICATIONS

▶ See the Instruction for use (FB-1022) for more informations.

06 PIEZON® PS

SAME POWER AND WATER RECOMMENDATIONS FOR ALL PIEZON® INSTRUMENTS

DEFAULT POWER SETTING FOR PIEZON® IS GBT SETTING



LOW SETTING

- ► For extremely sensitive patients
- ▶ Minimal calculus
- ► Children
- ► Gentle, however effective way to remove light calculus.



GBT SETTING

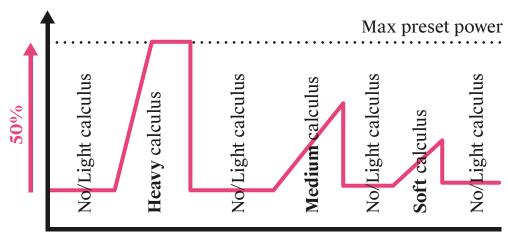
- ► Default setting for PIEZON treatment
- ▶ Power regulation is activated as soon as the instrument tip encounters calculus.
- ► Calculus is removed gently from the teeth; with no pain.
- ▶ GBT Machine will always be set on this setting once the handpiece is back on its holder.



HIGH SETTING

- ► Calculus efficiently, saving time and with high patient compliance.
- ► The power is set +25% higher than the GBT setting to remove all old calculus

DEFAULT WATER SETTING FOR PIEZON® IS MIDDLE SETTING



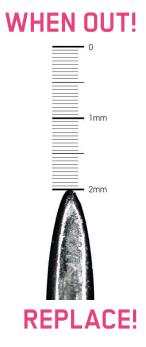


Delivered Power

CHECK TOOL

- ▶ Always check the wear of all your PIEZON® Instruments to ensure maximum comfort for your patients during treatment.
- ► You must change your PIEZON® PS Instrument if 2mm* is worn from the tip.
- ▶ By using an Instrument that is worn, you will damage the handpiece's sonotrode and therefore will need to buy a new handpiece.

NEW



▶ Instruments must be replaced for optimal efficacy.

- ▶ Predictability changes after 2mm.
- ▶ Efficiency and patient comfort may be affected.
- ▶ The handpiece's sonotrode can be damaged too, when using a worn out instrument.





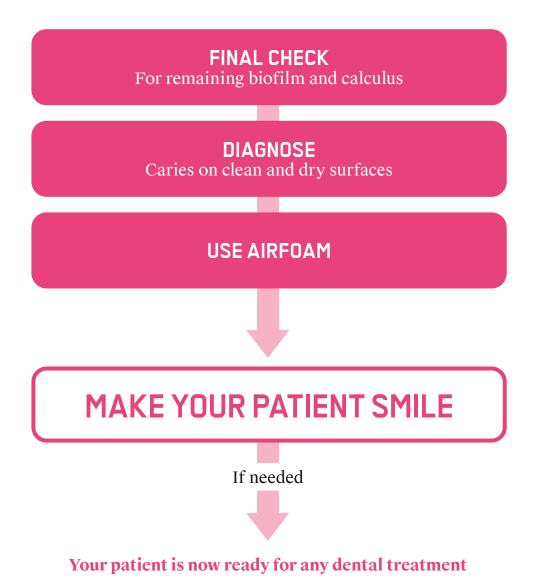
07 CHECK

FINAL CHECK

- ► Check for any remaining biofilm, stains and calculus.
- ▶ In addition, check for mobility of orthodontic appliances, prostheses, margins of restorations.
- ▶ Absence of biofilm, stains and calculus in supragingival areas enables clinicians to diagnose hard-tissues effectively, including the presence of caries, erosions, furcations and white spot lesions, etc.

EXCEPTION

▶ Following the use of PIEZON® on patients with gingival recession, reuse AIRFLOW® PLUS in order to ensure complete biofilm removal if needed.





AIRFOAM*

Use AIRFOAM after GBT treatment or after all dental treatments to give the patient a smooth feeling and mouth freshness. In addition, AIRFOAM protects the tooth surface until the next layer of salivary pellicle forms*.

It contains 1,450 ppm of fluoride. Available in one flavor - Berry

CONTAINS

Cetylpyridinium Chloride (CPC) = 0.05% Sodium Fluoride = 0.32% with Fluoride = 0.145% (1450 ppm)

USAGE

It is not suitable for children below the age of 7 years. Press the nozzle once to dispense the right amount of AIRFOAM for one use, about the size of a hazelnut.

- 1. Remove the protective cap from the can.
- 2. Hold the can upside down, shake it for apprx. 6 seconds.
- 3. Carefully and slowly press the nozzle.
- 4. Gently wipe the foam on the front teeth of your patient using fingers.
- 5. Let the patient spread the foam in the mouth themselves with their tongue.
- 6. Allow to act in the mouth for approx. 1 min. incl. all interdental spaces, spit out, done!

AIRFOAM eliminates the need for rubber cup and polishing pastes.

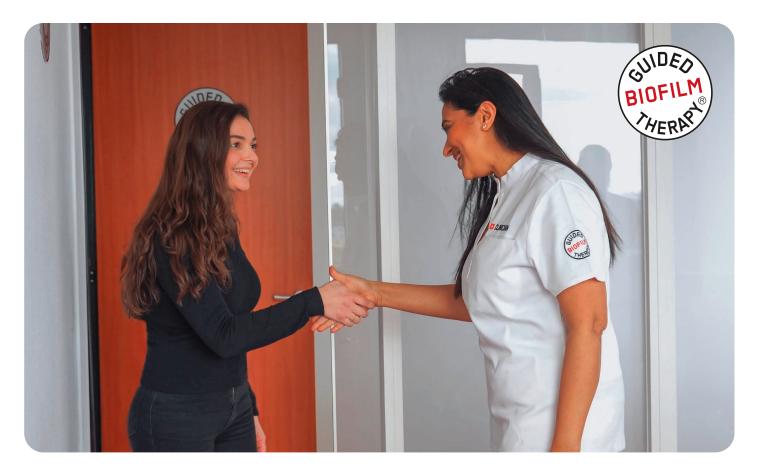


08 RECALL

▶ Recall frequency is based on the individual patient's risk assessment, caries risk, history of periodontal diseases, presence of any appliances, oral hygiene, habits of the patient and level of motivation.

Patient experience also plays an important role for recall.





RECOMMENDED RECALL SCHEDULE

0		RECALL
	HEALTHY > HEALTHY GINGIVA > NO BLEEDING ON PROBING > NO CARIES	6-12 MONTHS
	GINGIVITIS SHALLOW POCKET NO BONE LOSS BLEEDING ON PROBING	6 MONTHS
	PERIODONTITIS DEEP POCKET BONE LOSS BLEEDING ON PROBING NO SUPPURATION	1-3 MONTHS
	SUPPURATING PERIODONTITIS BONE LOSS BLEEDING ON PROBING SUPPURATION	1-3 MONTHS
	HEALTHY NO BONE LOSS HEALTHY GINGIVA NO BLEEDING ON PROBING NO SUPPURATION	6 MONTHS
	MUCOSITIS NO BONE LOSS BLEEDING ON PROBING NO SUPPURATION	3-6 MONTHS
	PERI-IMPLANTITIS > BONE LOSS > BLEEDING ON PROBING > NO SUPPURATION	1 MONTH
	SUPPURATING PERI-IMPLANTITIS > BONE LOSS > BLEEDING ON PROBING > SUPPURATION	1 MONTH

SWISS DENTAL ACADEMY

Enjoy high-quality education from anywhere, at any time Learning made accessible and convenient

Clinical Evidence













TRAINING MAKES PERFECT

Welcome to the Swiss Dental Academy (SDA) – your path to the future of dental care! At SDA, we're not just about dental education; we're revolutionizing it with Guided Biofilm Therapy (GBT). Here, you'll learn innovative, patient-focused techniques that set you apart in the world of dental prophylaxis and non-surgical periodontal treatment.

Experience the Swiss difference! SDA combines Swiss precision and innovation to offer world-class training. We're more than a learning center; we're a global movement, reshaping dental care with proactive prevention and patient-centered strategies.

Our courses, crafted by top dental experts and taught by renowned trainers, are more than just lessons – they're your stepping stones to becoming a leader in dental care. With SDA, you gain skills, inspire change, and commit to the highest standards of patient care.

Stay ahead in your field with SDA. Our ever-evolving curriculum, expanding course selection, and the latest technology ensure you're at the forefront of dental practices.

Join SDA today – lead the change in oral health, be at the frontier of dental excellence, and be part of a global community that's setting new standards in dental care. Your journey to excellence starts here!







E.M.S. Electro Medical Systems S.A. Ch. de la Vuarpillière 31 1260 Nyon - Switzerland +41 22 994 47 00 sdaglobalteam@ems-ch.com ems-dental.com



