WHY I CHOOSE PIEZON® NO PAIN TECHNOLOGY

EMS

Since the classical papers by Badersten[1-3] in the 1980's, machine-based instruments have been a mainstream methodology for cleaning teeth. The efficacy of machine-driven instruments has been consistently supported with reviews and systematic reviews [4].

For the main reason for the ease of use for the clinician and improving efficiency, we have seen multiple advances in technologies in different fields. These improvements in technology have led to some outstanding but often competing products and, in due course, clones of the market leaders. This diverse range of equipment can make it difficult for a clinician to decide what to do. The following broad descriptions will try and help the average clinician understand the keystone concepts in their decision.

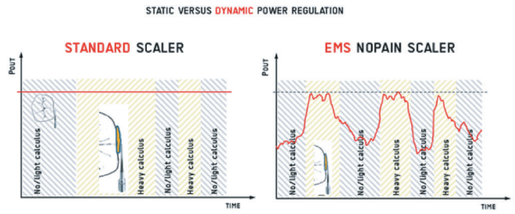
The first main distinction is that between electromagnetic and piezo-electric driven units. Electromagnetic instruments operate in an elliptical pattern. The instruments are characterised by the inserts being longer and consisting of the tip and an element that appears to have multiple layers of metal bonded together at each end. The units and tips are known for being resilient and very sturdy; However, they are larger to withstand the intended movements, and this can restrict their access in small spaces such as furcations. Additionally, it can be challenging to accurately control the tips to minimise the 'chatter' effect and reduce the discomfort experienced by patients. Frequently clinicians reduce the power level for patients comfort but that then makes them less efficient.

The other main category is piezo-electric based equipment. These instruments move in a uni-directional motion (i.e. a straight line). The removable components typically attach via screw thread with a dedicated torque wrench. The smaller range of movement allows for smaller, thinner instruments and that are able to access smaller spaces. However, if angled inappropriately or overpowered, they can fracture more easily. Additionally, clinicians can use the specific instruments in a parallel fashion whereby the instrument's motion follows the long axis of the tooth, allowing for easy removal of plaque and calculus without discomfort or a reduction in power. EMS PIEZON® NO PAIN technology is the gold standard when it comes to ultrasonic piezo-electric scaling and can be integrated into almost any dental unit on the market.

What makes PIEZON® technology so unique is the dynamic delivery of power to the instruments, monitored by a feedback system that checks and regulates at 125 times per second for a completelypersonalised treatment for each patient. As a result, when adapting the instrument along areas where there are no hard deposits, vibrations remain low to alleviate discomfort when power isn't required. When the instrument detects hard deposits, ultrasonic power increases to the maximum power set by the clinician. This is achieved by using the PIEZON® no pain module in conjunction with the PIEZON® handpiece and the Perio Slim (PS) instrument. If used appropriately, the clinician can deliver a comfortable, almost silent treatment with minimal vibrations experienced by the patient. This delivery of care is a dream for any clinician who frequently has patients claim that they have sensitive teeth that can only be cleaned by hand or with local anaesthetic! Hence why it is arguably the market leader.

Unfortunately, imitation, whilst being a source of flattery, is a big problem for the consumer. For excellent reasons, when companies release a leading product, the expectation is that you use the appropriate elements specific to that system as they have been designed. As shown in implant and non-genuine abutment interactions, small differences in fabrication and resulting tolerances can result in catastrophic failures over time. Hence the warning, DO NOT MIX DIFFERENT GENUINE AND NON-GENUINE PRODUCTS. The EMS instruments have been designed to work with the EMS handpieces. They also have their guidelines on how many cycles they can be processed (1000) and have conducted studies to check this.

Pain associated with ultrasonic scaling is typically caused by incorrect power settings and/or using worn or incorrect instrument tips. EMS have PIEZON® training courses across the country and online webinars on the correct usage of PIEZON®, visit https://professional.airflowdentalspa.com.au/webinars to check out the latest webinars and courses. You can also request a free EMS Instrument Card to test the wear and tear of your PIEZON® instruments, to receive your free card, visit: https://professional.airflowdentalspa.com.au/instrumentcheck/ When you have invested in equipment like "PIEZON® NO PAIN" technology and the "AIRFLOW® Prophylaxis Master" unit into your practice, it is significant. As much as other companies may claim their tips are 'compatible', trying to save by purchasing non-genuine elements may, in fact, cost you more in the future and void any warranties. Cheap can sometimes be more expensive! EMS have invested over 100,000 hours and technical and clinical testing in developing their equipment and systems [5] The result is a significant improvement over previous generations that has been supported by both research and clinicians feedback. Cleaning your patients' teeth will hopefully always be the primary experience patients have in your practice. A patient's experience whilst in our care is the keystone to building and maintaining their loyalty. It's logical to use every advancement in technology to make their most common experience with you as pleasant as possible and subsequently make our lives easier.



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4. Tunkel, J., A. Heinecke, and T. Flemmig, A systematic review of machine-driven and manual subgingival debridement in the treatment of chronic periodontitis. Journal of clinical periodontology, 2002. 29 Suppl 3: p. 72-81; discussion 90.
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