

VECTOR® – POWERFUL WITH ULTRASOUND
GENTLE BY DESIGN



THE BENCHMARK IN LOW-PAIN TREATMENT.

Over 20 years ago, Dürr Dental instigated a shift in ultrasound technology. The result was a new method for generating ultrasound, as well as a new device for periodontitis treatment: the Vector® Paro.



LUNOS[®]

MAKING SMILES BRIGHTER



THE VECTOR[®] PARO – TOTALLY UNIQUE IN ULTRASOUND TECHNOLOGY

When it comes to periodontitis treatment, sonic and ultrasonic instruments have established themselves as an alternative to traditional manual instruments. However, they offer disadvantages as well as advantages. Often, they move elliptically, meaning that even and vibration-free work is not always possible on every single tooth surface. This can result in irritation and unwanted loss of substance on the root surface.

This prompted Dürr Dental to develop its linear vibration deflection technology – and with it the Vector[®] principle – a proven periodontitis treatment system that is both gentle and protective. The ultrasonic energy is diverted to the place where it is needed – in a linear direction. Thanks to this unique oscillation deflection system, the instruments are only moved parallel to the root surface. This means that the ultrasonic energy can be used to deliver clinically efficient, non-traumatic treatment.

VECTOR[®] FROM PRINCIPLE TO SYSTEM

When Dürr Dental launched the Vector[®] system over 20 years ago, the company set new standards in the field of low-pain, minimally invasive periodontitis therapy. Even then, the aim of Dürr Dental was to deliver a holistic, cause-oriented systematic approach. Today, this approach has evolved into a complete system. It focuses on dental care, encourages self-healing processes, supports patient comfort and facilitates dental procedures. The Vector[®] plays a pivotal role in this system as an ultrasonic system for subgingival and supragingival treatments. It is supplemented with a wide range of specific aids and consumables.

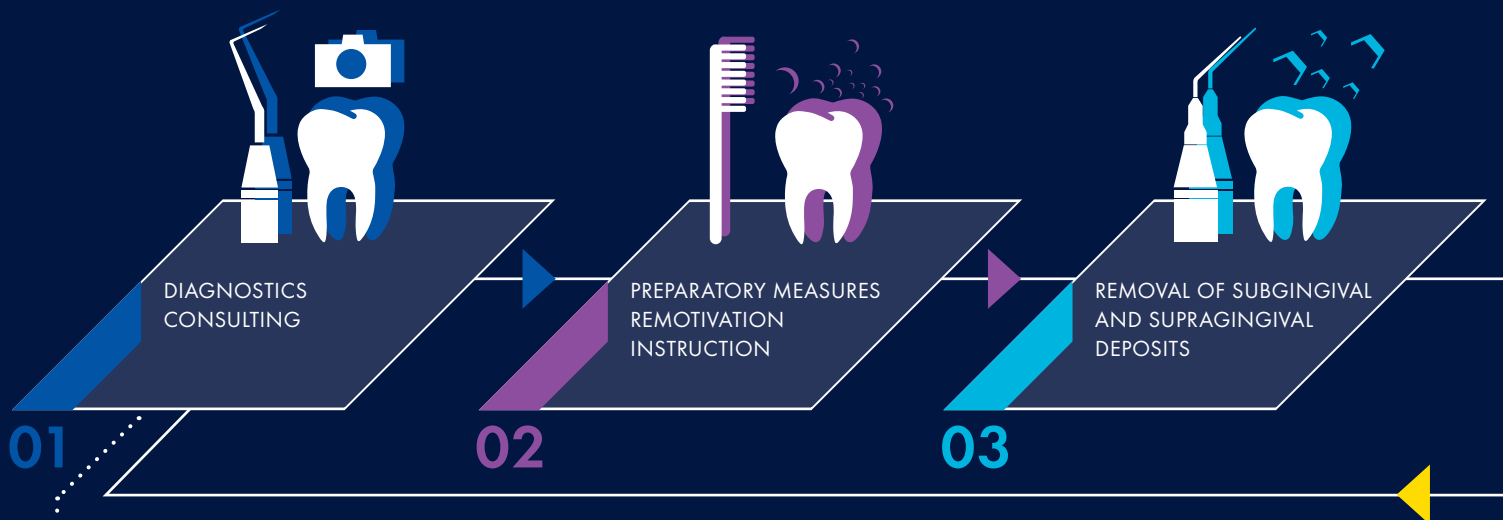
You will find the complete system for prophylaxis and periodontitis treatment on pages 4 and 5.

Below that, the table of contents provides an overview of all the relevant products and their wide range of applications.

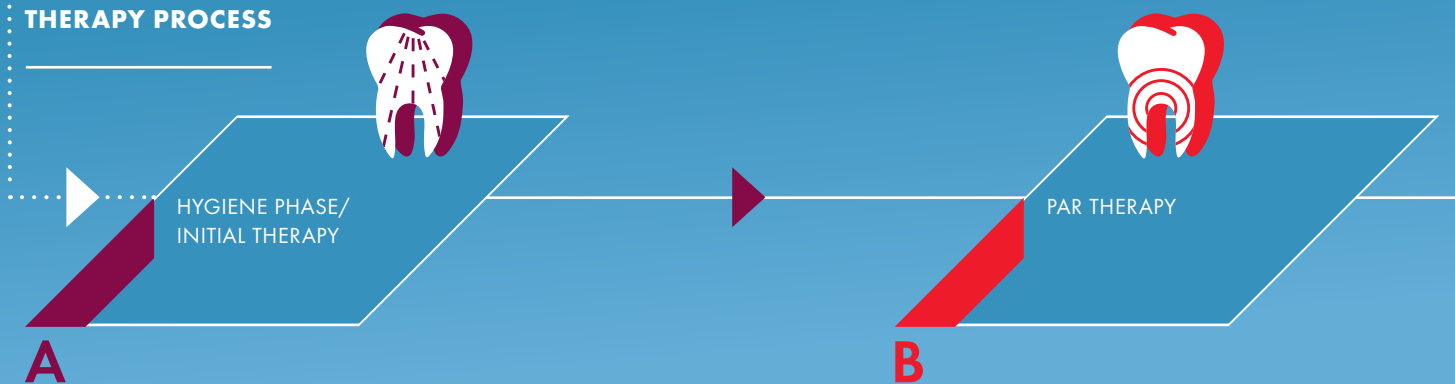
LUNOS® – BRIGHTER SMILES ALL ROUND.

Dürr Dental has developed a comprehensive prevention system for the maintenance of general oral health as well as for minimally invasive treatment of periodontitis or periimplantitis. This system accompanies and supports all steps that patients, dentists and the practice team go through during treatment.

PREVENTION PROCESS



THERAPY PROCESS





The building blocks of the system use digital imaging for diagnosis and patient communication, as well as the equipment and consumables that form part of professional prevention concepts and effective aids to increase patient comfort. All these things make the complete system from Dürr Dental efficient, gentle and effective – three features that are equally appreciated by dentists, practice personnel and patients.

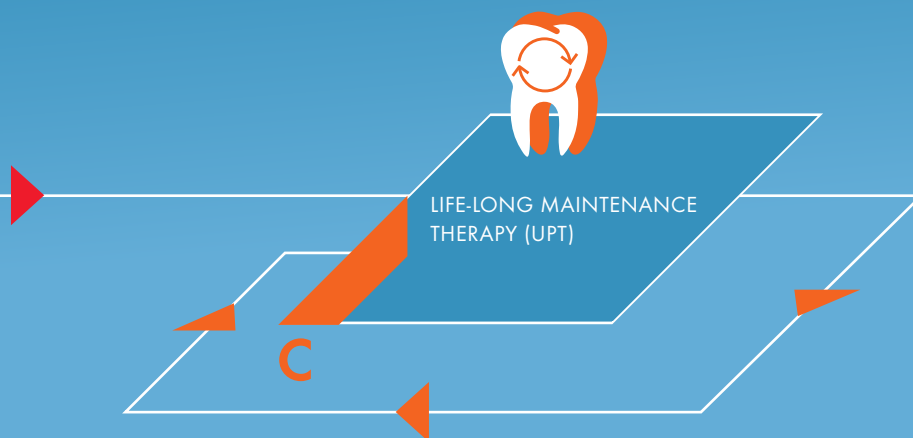
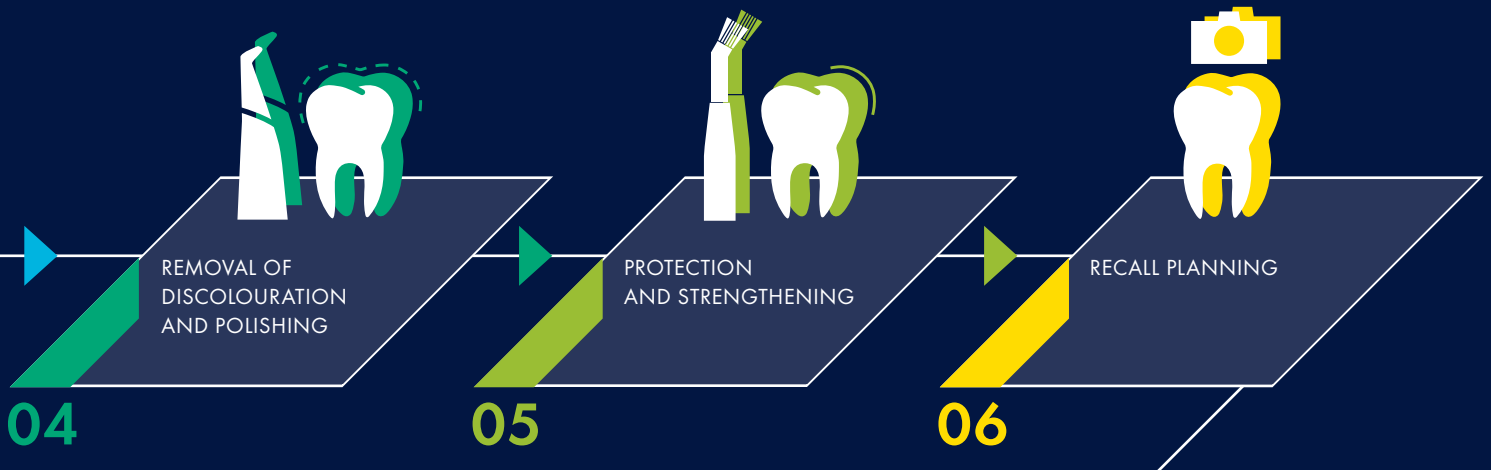
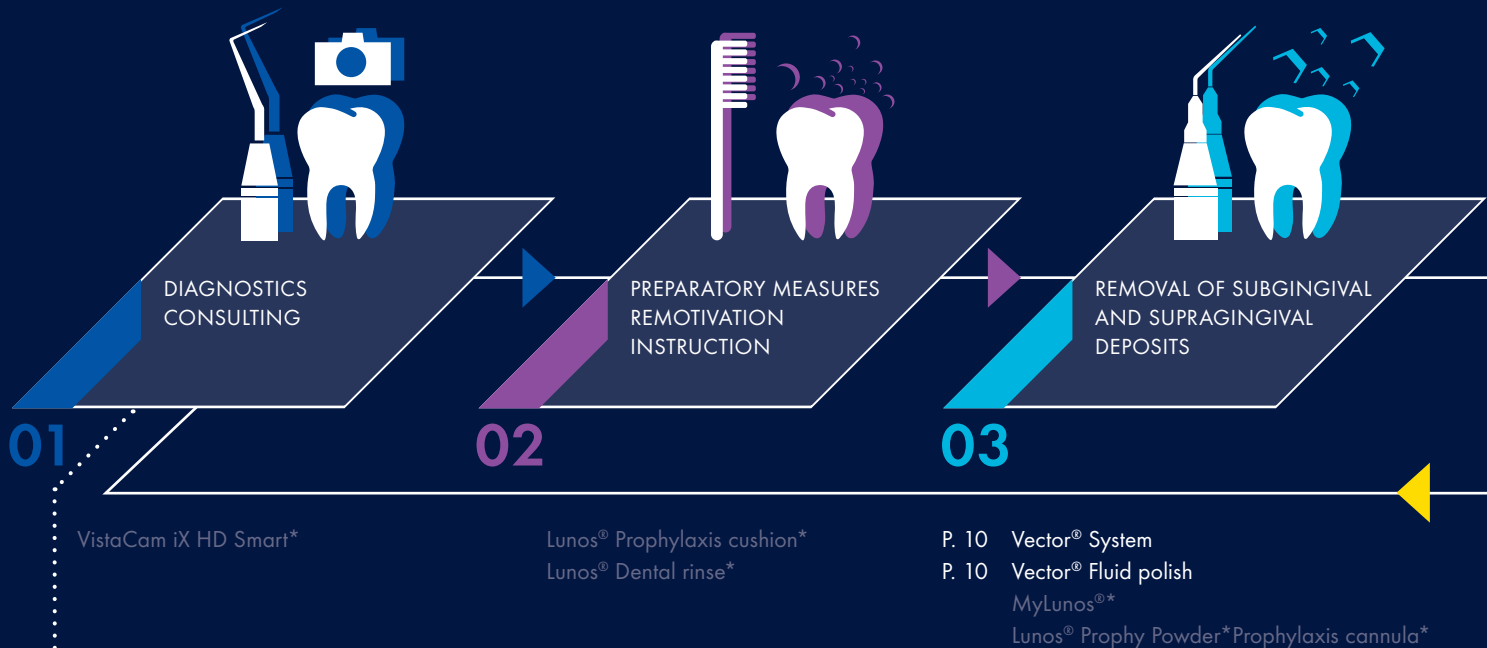
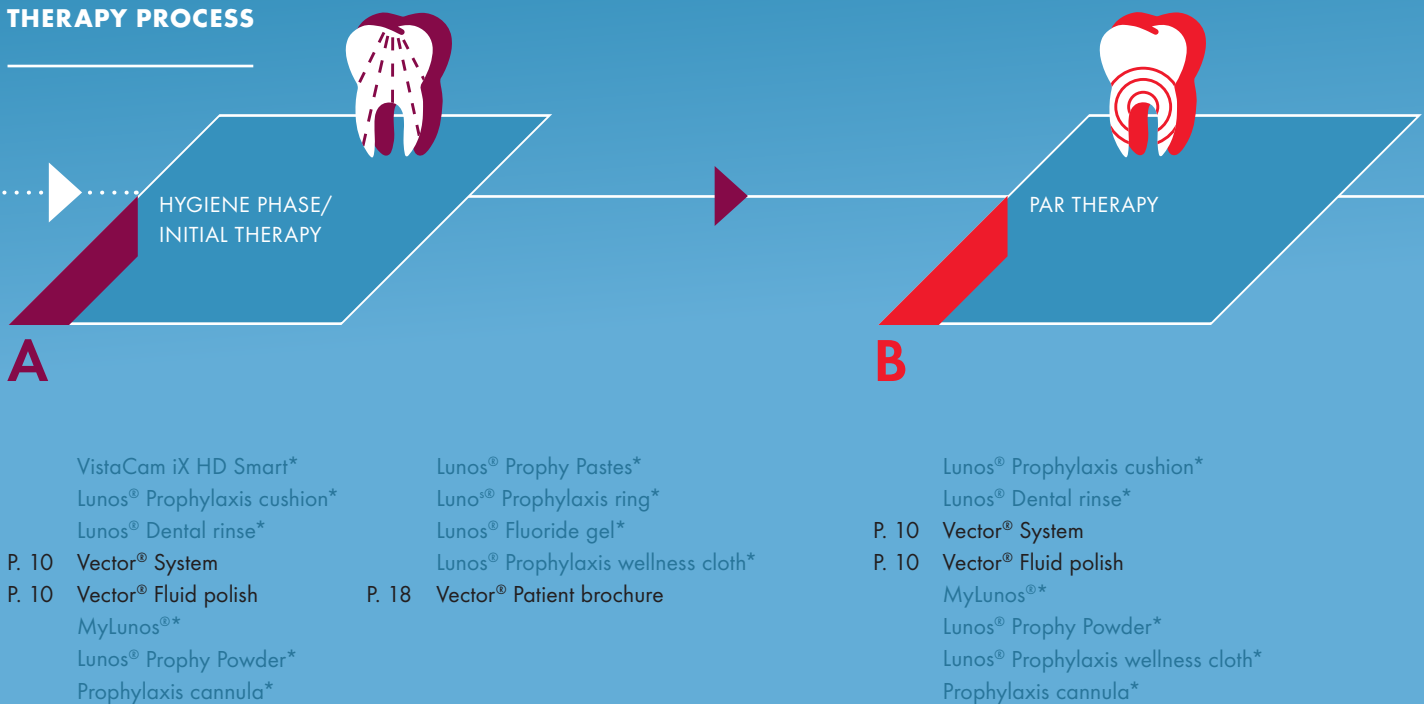


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PREVENTION PROCESS

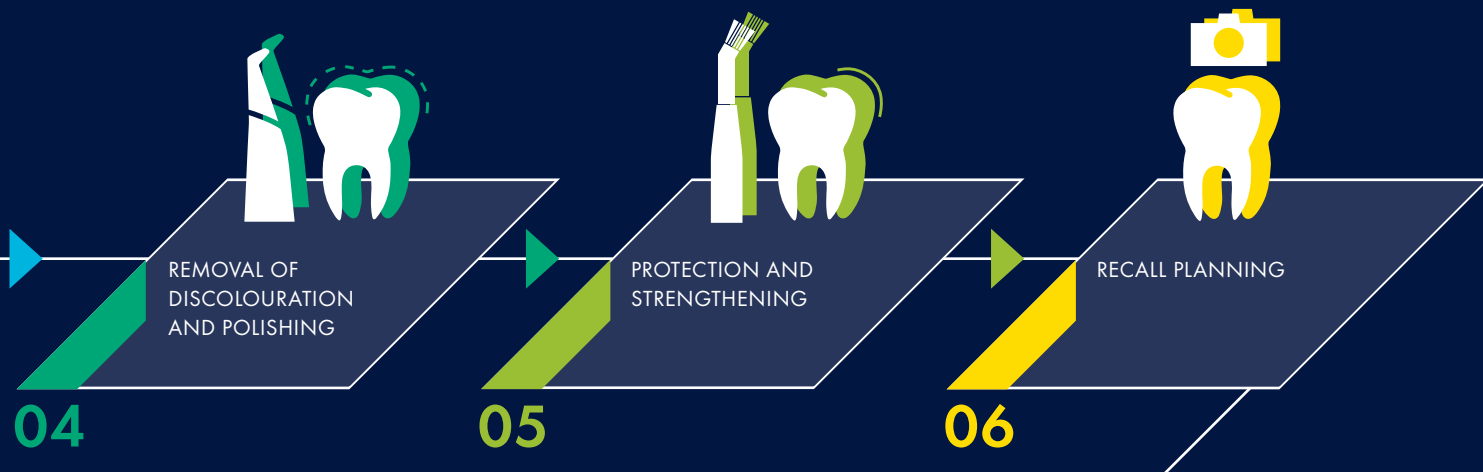


THERAPY PROCESS



*This product can be found in the system brochure from Dürr Dental.
These brochures are available from Dürr Dental free of charge.
For more information please visit www.duerrdental.com

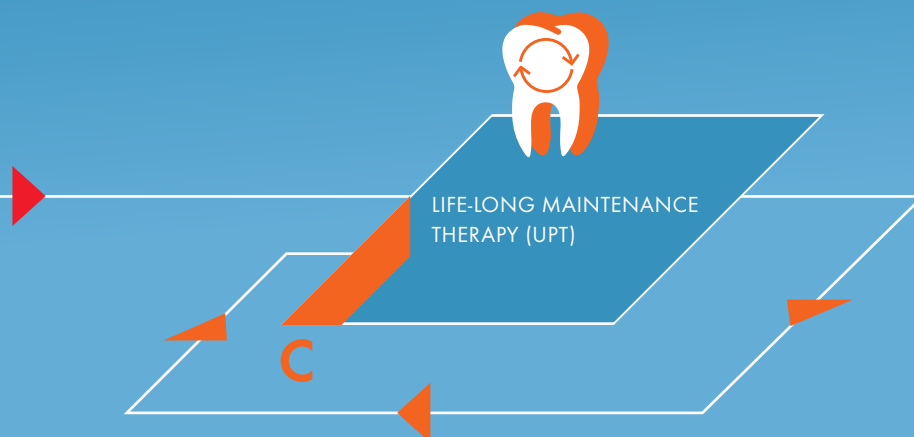
PRODUCTS AT A GLANCE



MyLunos®*
 Lunos® Prophy Powder*
 Prophylaxis cannula*
 Lunos® Prophy Pastes*
 Lunos® Prophylaxis ring*

Lunos® Fissure sealant*
 Lunos® Fluoride gel*

Lunos® Prophylaxis wellness cloth*
 Lunos® Patient brochure*
 VistaCam iX HD Smart*



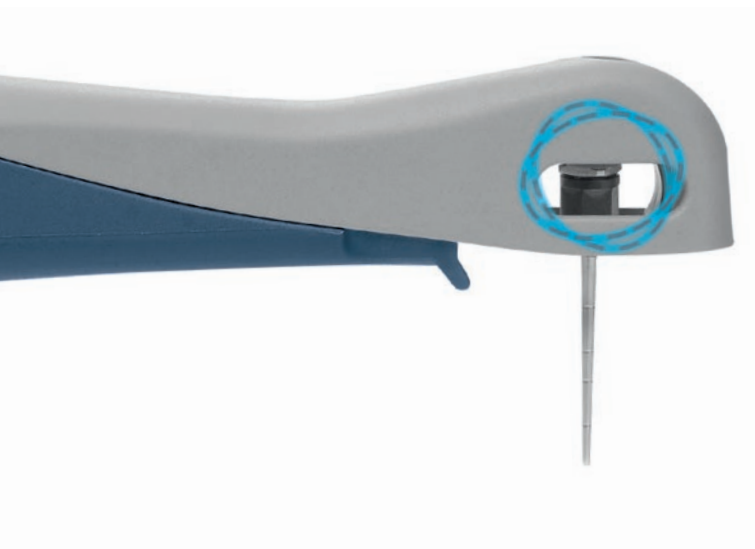
Vista Cam iX HD Smart*
 Lunos® Prophylaxis cushion*
 Lunos® Dental rinse*
 P. 10 Vector® System
 P. 10 Vector® Fluid polish
 MyLunos®*
 Lunos® Prophy Powder*
 Prophylaxis cannula*

Lunos® Prophy Pastes*
 Lunos® Prophylaxis ring*
 Lunos® Fluoride gel*
 Lunos® Prophylaxis wellness cloth*
 P. 18 Vector® Patient brochure

THE VECTOR® PRINCIPLE – GENTLE USE OF ULTRASONIC ENERGY.

CONDUCTED THROUGH THE RING

Gentle to teeth, hard on deposits



The Vector® principle skilfully reshapes ultrasonic oscillations into a linear up-and-down motion. The core element is a resonance ring, which is briefly deformed by high frequency stimulation and then returns to its starting position.

With this ultra-rapid change of shape, the resonance ring reshapes the ultrasonic oscillations through 90° into a linear movement of the instrument. This means that instruments move axially in parallel to the tooth surface, eliminating the unwanted vibrations that otherwise occur while working.

The vibration-free operational mode means a considerable increase in touch sensitivity for the therapist. Because the instruments move parallel to the root surface, the Vector® Paro can be used to deliver clinically efficient and non-traumatic treatment.



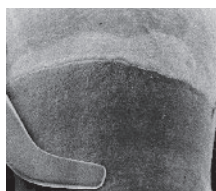
OUTSTANDING SENSITIVITY OF TOUCH

Top results in ultrasonic therapy

With Vector® you can completely trust your senses when administering treatment. This is because the unique oscillation deflection allows the therapist to control his or her highly sensitive work precisely, since the ultrasonic instruments work completely without unwanted vibrations. Already during the treatment process, the quality of the surface being treated can be controlled thanks to a high degree of touch sensitivity. This is enabled by the linear motion of the instrument. This ensures completely vibration-free work and enables touch control comparable to that of a diagnostic probe.

This process is supported and optimised by the polishing components in the Vector® Fluid polish, which is applied in the same step by the Vector® Paro and effectively removes biofilm from the surface to gently smooth it during treatment.

Treatment based on the Vector® principle is an extremely gentle method that protects and preserves the tooth substance. After treatment with Vector® Paro, patients displayed no notable loss of tooth substance.*



LOSS OF SUBSTANCE:

Root surface following hand planing



SMOOTH AND CLEAN:

Root surface after Vector® treatment



THE VECTOR® PRINCIPLE:

- 1 | Linear deflection of the ultrasound dynamics in the Paro handpiece
- 2 | Instrument moves axially, parallel to the surface of the root
- 3 | Precise 90° deflection in the vertical direction
- 4 | Vibration-free work
- 5 | Careful removal of biofilm, bacteria and deposits
- 6 | Smooth, clean surfaces
- 7 | Thorough and sensitive like no other system

* Kishida et al. (2004); see list of references (page 19), paragraph 8.

THE VECTOR® SYSTEM – A SYNERGY OF DESIGN AND FUNCTION.

The industry standard for minimally invasive and low-pain ultrasonic technology for over 20 years: linear vibration deflection technology from Dürr Dental. This ingenious piece of technology is installed in the Vector® Paro. Supplemented with a large selection of instruments and helpful accessories, Vector® represents the pinnacle of minimally invasive ultrasonic treatment. With high tech throughout the system.

PIONEERING SUPPLEMENTS



Vector® Fluid polish optimises polishing on the basis of hydroxyapatite and promotes successful cleaning of the tooth surface with low-pain treatment.

FREE OF:

- ✓ ANIMAL-DERIVED INGREDIENTS
- ✓ LACTOSE
- ✓ GLUTEN
- ✓ FRUCTOSE

PIONEERING SYSTEM



Specially tailored accessories complete the Vector® system.

You can find details of all the components in the Vector® brochure from Dürr Dental.



PIONEERING TECHNOLOGIES

Paro handpiece with vibration deflection for gentle subgingival treatment. Modern scaler technology with 6 LEDs enables the best overview for supra- and subgingival application.



PIONEERING INDEPENDENCE

A large removable water tank means that there is no need for a fixed water supply.



PIONEERING FORM

Both handpieces impress with a high degree of operator friendliness.



PIONEERING SIMPLICITY AND HYGIENE

The clearly laid out operating panel for intuitive operation. There are no gaps or joins in the surfaces, so they fulfil the highest hygiene requirements. The unit automatically indicates when regular cleaning is due and facilitates the rinsing of the media conveying system. Handpieces and instruments can be reprocessed in validated manual or automatic processes.



PERIODONTAL TREATMENT WITH THE PARO HANDPIECE.

INITIAL THERAPY

The main targets for the initial treatment are thorough removal of biofilm and the mineralised components of the biofilm in the form of calculus, and smoothing of the root surface down to the base of the pockets. Although the mineral ingredients do not actually trigger periodontal inflammation, they provide an ideal breeding ground for renewed growth of periodontal pathogenic germs.

The precisely coordinated Paro instruments are made from high-quality surgical steel and allow this type of treatment to be carried out in a clinically efficient and successful manner. Ultra-fine particles of hydroxyapatite and calcium phosphate in the Vector® Fluid polish aid cleaning in combination with the Vector® system. The suspension reduces hypersensitivity during treatment. The pocket is always rinsed intensively – but with 10x less potentially aerosol-forming liquid than on conventional ultrasonic scalars. Thanks to hydrodynamic effects, the bacterial count is reduced dramatically.



PARO TOOL KIT

Instrument box with 5 instruments incl. lid with torque wrench



MOLARS



Condition at the start of treatment



Condition after 3 months



Condition after 1 year



Condition after 3 years

© Dr. Mauksch

MAINTENANCE TREATMENT (RECALL)

Even after thorough cleaning of the root surface, bacteria will resettle in the periodontal pockets within a few days. For this reason, the initial therapy must always be followed by maintenance therapy or supportive periodontitis treatment (UPT) at regular intervals in order to prevent re-infection of the pockets. The intervals between recall sessions must be determined individually for each patient.

The Vector® system offers ideal instruments for this type of treatment made of flexible plastic, along with carbon fibre-reinforced probes and prophylaxis curettes. These are especially gentle, even to sensitive surfaces, and are therefore suitable for implant cleaning, mucositis or periimplantitis treatment.

Thanks to the gentle yet dynamic ultrasonic treatment with the Vector® Paro or Paro Pro in combination with the Vector® Fluid polish, biofilm and concrement are gently removed and bacteria and endotoxins are reduced. This cleaning process leaves the tooth surface noticeably smoother, helping to prevent bacteria from resettling again.



THIS IS WHAT COUNTS:

- Targeting the causes of periodontitis
- Gentle and effective removal of bacteria and biofilm
- Low-pain therapy*
- Efficient concrement removal without irritation
- Greatest possible retention of regenerative tissue
- Root surface cleaning right down to the bottom of the pockets
- No damage to soft tissue or root surfaces
- Effective even in anatomically difficult areas

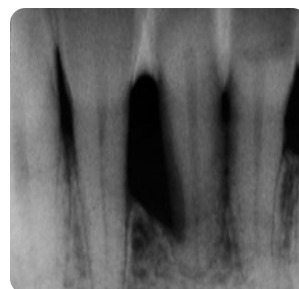
FRONT TEETH



Condition at the start of treatment



Condition after 3 months



Condition after 1 year



Condition after 3 years

© Dr. Mauksch

*Braun et al. (2003); see list of references (page 19), paragraph 1

PERIIMPLANTITIS THERAPY WITH THE DEM VECTOR® PARO.

MUCOSITIS/PERIIMPLANTITIS TREATMENT

In order to keep dental implants and periimplant soft tissue healthy, regular and systematic removal of bacterial deposits and biofilm is absolutely vital – just like for prophylaxis treatment for gingivitis and periodontitis. Implants are surrounded by bacterial plaque. Regular professional cleaning is essential here. Otherwise, inflammatory changes in the soft tissue can occur that – in the worst-case scenario – can lead to loss of the implant.

Vector® recall/implant instruments are specially designed for this type of treatment. They permit reliable and thorough cleaning of implant surfaces without damaging the implant. Instruments manufactured from special fibre-reinforced composites and plastic instruments made especially for treating implant surfaces enable clinically successful periimplantitis treatment.



RECALL/IMPLANT TOOL KIT Instrument box with 4 instruments incl. lid with torque wrench



*Karring et al. (2005); see list of references (page 19), paragraph. 6

PROFESSIONAL DENTAL CLEANING WITH THE SCALER HANDPIECE.

VARIED APPLICATIONS

Professional dental cleaning is possible to the highest standards with the Scaler handpiece from Dürr Dental. Particularly slender instruments for supra- and subgingival treatment enable efficient but gentle plaque removal.

The piezo-ceramic drive allows efficient removal of deposits while providing the best and gentlest possible protection of sensitive tissue structures. The fact that the Scaler handpiece can be partially dismantled makes cleaning and disinfection particularly easy.

FROM A TECHNICAL POINT OF VIEW, THIS IS A REAL HIGHLIGHT.

In addition to the modern and timeless unit design and the ergonomic Scaler handpiece, 6 powerful LEDs, connected in parallel, ensure the best possible lighting – even in areas that are hard to see. The sterilisable light conductors combine a long service life with excellent cost-effectiveness.

THE VECTOR®
SCALER IS
ALSO AVAILABLE
AS A SEPARATE
DEVICE.



SCALER TOOL KITS with separate torque wrench

Instruments for subgingival and supragingival applications with the Vector® Scaler



ACCESSORIES

PARO AND SCALER HANDPIECES

Both handpieces impress with excellent ergonomics. The Paro handpiece with unique deflection of oscillations enables particularly gentle subgingival treatment. The Scaler handpiece is equipped with 6 powerful LEDs for the best possible overview of the work as it is being carried out.



VECTOR® FLUID POLISH

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Vector® Fluid polish, as a suspension with hydroxyapatite, calcium phosphate and a fresh mint taste, promotes low-pain, minimally invasive cleaning in combination with the Vector® system.

- FREE OF:
- ✓ ANIMAL-DERIVED INGREDIENTS
 - ✓ LACTOSE
 - ✓ GLUTEN
 - ✓ FRUCTOSE



TOOL KITS

- Paro tool kit incl. torque wrench
- Recall/Implant tool kit incl. torque wrench
- Scaler tool kits with torque wrenches



RINSING ADAPTER

With the practical rinsing adapters you can easily rinse the inner lumens of handpieces and instruments with the aid of a standard syringe and disinfect them following validated procedures.



VECTOR® CLEANER

Ready-to-use solution for removing acid-soluble deposits in the hose system and handpieces of the Vector® system.

- Intensive cleaning effect
- Excellent material compatibility



VECTOR®/RINSEDO DISINFECTION

Ready-to-use solution for disinfecting the liquid channel in the Vector® hoses and in the RinsEndo handpiece.

- Broad range of effectiveness
- Excellent material compatibility



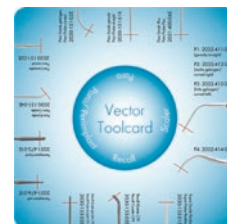
MULTIFUNCTIONAL FOOT SWITCH

The units can be easily operated with the aid of the foot switch, or via wireless or cable connection.



TOOLCARD

The toolcard is used to monitor instrument wear.



SERVICE KIT

This set contains replacement parts such as seals, nozzles, O-rings etc.



SERVICE AND SALES PACKAGES

SALES PACKAGES

The Vector® system is available in the following versions:

VECTOR® PARO

Vector® Paro periodontal treatment device incl. Paro handpiece, Flex footswitch, Vector® Fluid polish, Vector®/RinsEndo Disinfection, Vector® Cleaner, service kit, steri-box, Paro tool kit, Recall/Implant tool kit.



VECTOR® PARO PRO

Vector® Paro Pro periodontal treatment device incl. Paro handpiece, Scaler handpiece, Flex footswitch, Vector® Fluid polish, Vector®/RinsEndo Disinfection, Vector® Cleaner, service kit, 2 steri-boxes, Paro tool kit, Recall/Implant tool kit, Scaler P1 tool kit.



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