PERIO

Varios Perio Tips are thin and designed for root planing and maintenance (breaking up biofilm), to provide the best access to furcation and curved roots.

THE PHILOSOPHY OF ULTRASONIC TREATMENTS IN PERIODONTICS

Since the beginning of time, man has continually sought to push his boundaries. The desire for progress and the use of new technologies is particularly challenging for dentists who must now be able to integrate periodontics into their general practice.

While conventional, non-surgical treatment is considered as the “Gold Standard”, the fact remains that if access to a certain site is difficult, disinfection is not comprehensive and the quality of the curettage is still sometimes insufficient. These manual treatments are often tedious for the dentist and uncomfortable for the patient.
Knowledge and understanding of ultrasonics and advances in the design of micro-tips are just some of the elements which mark the superiority of the ultrasonics treatment (Kocher, 1997 Gagnot et al in 1999 Gagnot, JPIO 2002) and push the boundaries of periodontal surgery. (Brent Scott et al 1999, Himeno 1994)(Ishikawa and Baehni, 2004; Heitz-Mayfield 2005)
We understand that the chances of reattachment and regeneration are related to the biocompatibility of tissues (cementum, gingival wall, periodontal ligament). Therefore the clinical challenge lies in the disruption of the biofilm and plaque retention elements (mineralised debris), while protecting tissues vital to healing (Goncalves and coll, 2008) (Fuzaka and Nishimura 1994. Smart et al 1990).

Unlike other systems, the piezoelectric system provides a tip movement in the spindle of the handpiece. This movement controls the tip and allows the status of the surfaces to be respected by limiting iatrogenic effects. (Joki Kasthira et al 92)
The preserved tissues will allow the formation of a new attachment.

This control of ultrasonics and the movement of the tip allows us to tackle the idea of "tissue ecology", preserving the periodontal environment in order to permit long-term healing.

RECOMMENDATIONS FOR THE USE OF MICRO-TIPS IN PERIODONTICS

These usage recommendations aim to increase the effectiveness of the vibrating action and develop tactile sensitivity. These concepts are fundamental in optimising the effectiveness of the debridement.

ERGONOMICS

Adjustment in perio mode at low speed
Micro-irrigation adjustment.
Brush socket of the handpiece with three fingers: thumb on the NSK handpiece of the handpiece

Easing the weight of the cord
Perioral pressure points

USING the tips

Light lateral pressure against the cemental surface
Work on the last two mm
Put in the salient line on the root surface (Viguier photos: file position 2mm from the tip)
Always remain in contact with the surface
Remember the concept of methodical, slow, limited scanning
Coronary access and lateral access of hard deposits.

P4,5, P14-P17 writing by Drs Solenn HOURDIN(Ms) and Dominique GLEZ(Mr)

PRESENTATION OF THE RANGE OF MICRO-TIPS IN PERIODONTICS

The micro-tips used in the treatment of periodontitis (reference P) are different from the non-specialised tips (reference G) used on enamel for scaling. The P micro-tips are used at low speeds in order to reduce iatrogenic effects on the cementum and to develop the dentist's tactile sensitivity.
■ Scaling Tips ➡P.8-11

The profile of the tip's active area, located in the last 2mm, allows us to differentiate between them. A suitable profile makes it possible to work effectively at low speeds in deep pockets without injected anaesthetic.

There are three main families of micro-tip: Curette micro-tips, round micro-tips and diamond micro-tips (ref Gilles Gagnot book). These tips are used carefully and methodically. (ref tables)
Curette micro-tips (P10, P26R, P26L) are used in the initial stages of treatment. Round (P1, P20, P21R, P21L, P25R, P25L) and composite (V-P10) micro-tips are appropriate for the maintenance stage and diamond micro-tips (P1D, P2D, P3D) are kept for the treatment of abscesses, persistent inflammatory and furcation areas. ■Perio Tips ➡P.18-27
The table presents the different indications for each of the tips and their usage speed.
This guide gives details of the tips in combination with clinical videos in order to improve the learning curve.

The equipment offered by NSK is suited to the implementation of current cleaning techniques by fully meeting the specifications.

	Scaling tip									
TIP No.	G1	G2	G3	G4	G5	G6	G8	G11	G12	G13
Mode selection	G	G	G	G	G	G	G	G	G	G
Single rooted	●	●	●	●	●	●	●	●	●	●
Multirooted	●	●	●	●	●	●	●	●	●	●
Removal supra gingival tartar	●	●	●	●	●	●	●	●	●	●
Removal tartar interdental narrow space	●				●	●	●			
Removal marginal gingival calculus	●			●	●	●	●			
Removal tartar in deep gingival										
Removal gingival biofilm					●	●				
Removal on Biofilm furcation area										
Removal of Implant Biofilm										
Removal on junction biofilm prosthetic tooth										
Removal on biofilm dental erosion										
Incising of furcations										
Incising of abscess										
Peeling internal wall of pocket										

	Micro tip round					Micro tip Curette			Micro tip diamonded	
TIP No.	P1	P20	P21R/L	P25R/L	V-P10	P10	P11R/L	P26R/L	P1D	P2D/3D
Mode selection	P	P	P	P	P	P	P	P	P	P
Single rooted	●	●	●	●	●	●	●	●	●	●
Multirooted		●	●	●	●	●	●	●	●	●
Removal supra gingival tartar						●				
Removal tartar interdental narrow space	●					●	●	●	●	●
Removal marginal gingival calculus						●				
Removal tartar in deep gingival							●	●	●	●
Removal gingival biofilm	●	●	●	●		●	●	●		
Removal on Biofilm furcation area				●			●	●		
Removal of Implant Biofilm					●					
Removal on junction biofilm prosthetic tooth					●					
Removal on biofilm dental erosion					●					
Incising of furcations							●	●		●
Incising of abscess									●	●
Peeling internal wall of pocket									●	●

BIBLIOGRAPHY

Gonçalves et Coll. Root Cementum May modulate gene expression During Periodontal Regeneration: A preliminary study in Humans. J Periodontol., 2008. 323- 331.

Gilles Gagnot et Coll. Les ultrasons en odontologie. Applications Thérapeutiques. Memento Editions CdP

KOCHER T., RÜHLING A., MONSEN H., PLAGMANN HC. -Effectiveness of subgingival instrumentation with power-driven instruments in the hands of experienced and inexperienced operators. J Clin Periodontol 1997; 24: 498-504.

GAGNOT G., MICHEL JF., DARCEL J., CATHELINEAU G. - Action de nouveaux inserts ultrasoniques sur les dômes des espaces interradiculaires. Observation au MEB. J Parodontol Implant Orale 1999; 19: 411-419

GAGNOT G., MORA F., POBLETTE M., VACHEY E., MICHEL JF., CATHELINEAU G. -A comparative study of manual and ultrasonic instrumentation on root surfaces. J Periodontol 2002; 73: 10-1245.

BRENTSCOTT J., STEED-VEILANDS AM., YUKNA RA. -Efficacité accrue du détartrage des espaces inter-radiculaires par l'utilisation d'inserts ultrasonores diamantés. Parodontie et Dentisterie Restauratrice 1999; 19: 354-361.

HIMENO H., TSUTSUMIDA K., SATO K., HONDA M., MIYAHARA A. -A study on a new and practical ultrasonic root planning method (URM). The journal of the hokkaido Dental Association 1991; 46: 122-133.

FUKAZAWA E., NISHIMURA K. -Superficial cemental curettage : its efficacy in promoting improved cellular attachment on human root surfaces previously damaged by periodontitis. J Periodontol 1994; 65: 168-176.

SMART GJ., WILSON M., DAVIES EH., KIESER JB. -The assessment of ultrasonic root surface debridement by determination of residual endotoxin levels. J Clinical Perio 1990; 17: 174-178.

JOTIKASTHIRA NE., LIE T., LEKNES KN. -Comparative in vitro studies of sonic, ultrasonic and reciprocating scaling instrument. J Clin Periodontal 1992; 19 (8) : 560-9.

Heitz-Mayfield LJ.
How effective is surgical therapy compared with nonsurgical debridement?
Periodontol 2000. 2005;37:72-87.

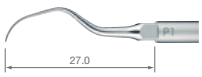
Ishikawa I, Baehni P.
Nonsurgical periodontal therapy--where do we stand now?
Periodontol 2000. 2004;36:9-13.

P4,5, P14~P17 writing by Drs Solenn HOURDIN(Ms) and Dominique GLEZ(Mr)

PERIO

P1

• Removal of tartar narrow interdental space. • Removal of gingival biofilm.

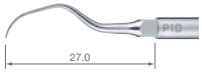


NSK Satelec® MODEL **P1** ORDER CODE **Z217404**

Single rooted

P1D

• Removal of tartar narrow interdental space. • Removal of tartar in deep gingival.
• Debridement of abscess. • Peeling wall internal pocket.

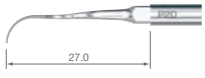


NSK Satelec® MODEL **P1D** ORDER CODE **Z217405** • Diamond coated

Single rooted / Multi rooted

P2D

• Removal of tartar narrow interdental space. • Removal of tartar in deep gingival.
• Debridement of furcations. • Debridement of abscess. • Peeling wall internal pocket.



NSK Satelec® MODEL **P2D** ORDER CODE **Z217402**

• Diamond coated
• Right curved type

Single rooted / Multi rooted

P3D

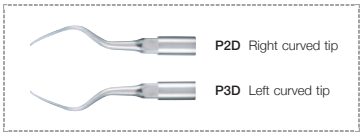
• Removal of tartar narrow interdental space. • Removal of tartar in deep gingival.
• Debridement of furcations. • Debridement of abscess. • Peeling wall internal pocket.

NSK Satelec® MODEL **P3D** ORDER CODE **Z217403**

• Diamond coated
• Left curved type

Single rooted / Multi rooted

P2D / P3D (From above)



＊Cross section diagram is the image of a point 1 mm from the end.
The illustrated tip diagram is four times bigger than the actual size.

Satelec® is registered trademarks of Acteon SA, France.

Refer to the power guide on pages 64-65.

PERIO

P10

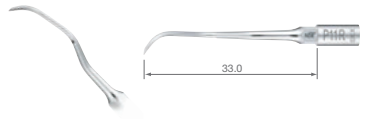
• Removal of supra gingival tartar. • Removal of tartar narrow interdental space
• Removal of marginal gingival calculus. • Removal of gingival biofilm.

NSK Satelec® MODEL P10 ORDER CODE Z217410 • Sharp edge

Single rooted / Multi rooted

P11R

• Removal of tartar narrow interdental space. • Removal of tartar in deep gingival.
• Removal of gingival biofilm. • Removal of Biofilm furcation area. • Debridement of furcations.

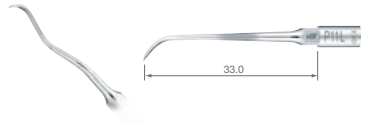


NSK Satelec® MODEL P11R ORDER CODE Z217408 • Sharp edge • Right curved type

Single rooted / Multi rooted

P11L

• Removal of tartar narrow interdental space. • Removal of tartar in deep gingival.
• Removal of gingival biofilm. • Removal of Biofilm furcation area. • Debridement of furcations.

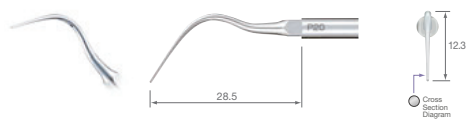


NSK Satelec® MODEL P11L ORDER CODE Z217409 • Sharp edge • Left curved type

Single rooted / Multi rooted

P20

• Removal of gingival biofilm.

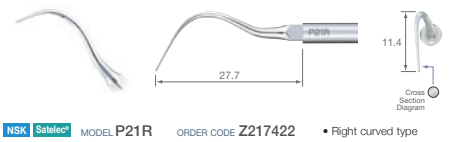


NSK Satelec® MODEL P20 ORDER CODE Z217420
EMS® MODEL P20-E ORDER CODE Z291420

Single rooted / Multi rooted

P21R

• Removal of gingival biofilm.

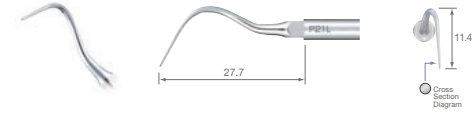


NSK Satelec® MODEL P21R ORDER CODE Z217422 • Right curved type
EMS® MODEL P21R-E ORDER CODE Z291422

Single rooted / Multi rooted

P21L

• Removal of gingival biofilm.



NSK Satelec® MODEL P21L ORDER CODE Z217421 • Left curved type
EMS® MODEL P21L-E ORDER CODE Z291421

Single rooted / Multi rooted

∗Cross section diagram is the image of a point 1 mm from the end.
The illustrated tip diagram is four times bigger than the actual size.

Refer to the power guide on pages 64-65.

PERIO

P25R

• Removal of gingival biofilm. • Removal of Biofilm furcation area.

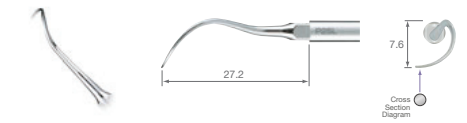
NSK Satelec® MODEL P25R ORDER CODE Z217424 • Right curved type

EMS® MODEL P25R-E ORDER CODE Z291424

Single rooted / Multi rooted

P25L

• Removal of gingival biofilm. • Removal of Biofilm furcation area.

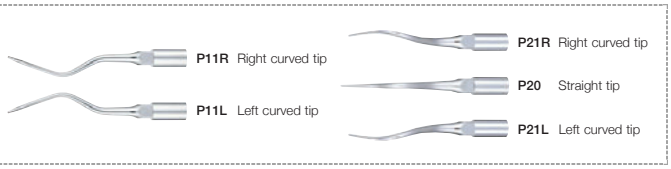


NSK Satelec® MODEL P25L ORDER CODE Z217425 • Left curved type

EMS® MODEL P25L-E ORDER CODE Z291425

Single rooted / Multi rooted

P11R / P11L / P21R / P20 / P21L (From above)



P26R

• Removal of tartar narrow interdental space. • Removal of tartar in deep gingival.
• Removal of gingival biofilm. • Removal of Biofilm furcation area. • Debridement of furcations.

NSK Satelec® MODEL P26R ORDER CODE Z217426 • Sharp edge • Right curved type

Single rooted / Multi rooted

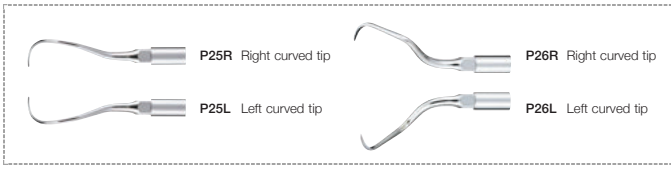
P26L

• Removal of tartar narrow interdental space. • Removal of tartar in deep gingival.
• Removal of gingival biofilm. • Removal of Biofilm furcation area. • Debridement of furcations.

NSK Satelec® MODEL P26L ORDER CODE Z217427 • Sharp edge • Left curved type

Single rooted / Multi rooted

P25R / P25L / P26R / P26L (From above)



*Cross section diagram is the image of a point 1 mm from the end.
The illustrated tip diagram is four times bigger than the actual size.

Refer to the power guide on pages 64-65.