Color Coding System

TipBook

Tip Book

SATELEC

ACTEON Equipment

English

Introduction

Satelec® has been manufacturing ultrasonic generators for over 40 years now and developed the first ever piezoelectric scaler for dentistry. (8)

Our motto? Innovation now and into the future, to ensure that you benefit from the best technology for your day-to-day practice and the "cutting edge" tools you need for the most exacting odontological procedures.

Our **Newtron**® line of generators, already a leader in the ultrasonic market, is available in table-top form and as built-in modules, in a complete selection which offers the following features:

- Automatic, real-time frequency adjustment;
- Full control of oscillation amplitude;
- One of the broadest power ranges on the market.

This technological advance is the result of constant R&D investments and the quality of our engineering teams, who work tirelessly to meet your needs.

The purpose of this **TipBook** is to help you select the tip best suited for the treatment you perform and discover new treatment options using ultrasonic instruments.

Our new clinical kits allow you to carry out your procedures quickly, simply and efficiently, thanks to optimized settings and clear instructions.

Our professionalism is tightly linked to the very close collaborative relationships we maintain with teams of clinicians and university researchers around the world.

This catalog is a result of this same collaborative effort and we trust that it will meet with your approval and convince you that in choosing Satelec, you have chosen the very best in ultrasonic instruments.

Francis Dieras

Director of Research and Development

Acknowledgements

This edition of the **TipBook** has been written with the guidance and backing of university lecturers and scientists, specialists and scientific consultants.

Our protocols, and the findings that support them, originate from university theses and international publications, which you will find referenced in the bibliography.

We have of course gained tremendous experience over the last forty years from the dentists worldwide who, through their recommendations and advice, have contributed to the improvement of our products.

But our special thanks go to each Satelec user who shows faith in us, each time they choose one of our products.

Gilles Pierson

President

Tips

Mastering ultrasound does not stop at devising generators and control software, it also means designing the appropriate accessories that will give them optimum vibration power and guarantee their reliability. (27)

Our instruments are made from the best alloys, exclusive to **Satelec**, using patented procedures.

We offer you a range of different coatings (diamond, thermal treatments) or materials (carbon) so you can choose the most suitable and efficient instrument for each material, giving you better performance.

Satelec's expertise in tuning all its ultrasonic instruments is second to none. Our transducers are probably the best in the world and certainly the only ultrasonic motors capable of driving all these tips at maximum performance, whatever their type or composition.

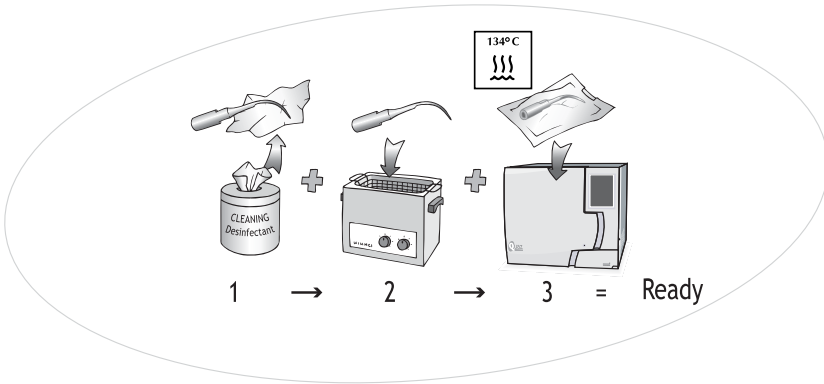
Advantages

- **Corrosion resistant:** the steel alloy we have chosen does not corrode and is resistant to decontamination products as well as to irrigation solutions.
- **Tensile strength:** the manufacturing procedures are designed, and the tensile properties adjusted, to suit the treatments for which they are intended.
- **Sterilization:** the tips are suitable for autoclave sterilization, to comply with ISO-11134, as are the handpieces and accessories (wrenches, storage kits, etc.):

  Temperature: 134°C;

  Pressure: 2 bars (29 P.S.I.);

  Sterilization time: 18 minutes.



Calibration

Each tip is individually tested and "tuned" using the latest in ultrasonic calibration techniques. Our R&D department constantly monitors and evaluates the performance of our instruments with the assistance of leading clinicians from all dental disciplines.

Spray Control System (SCS)

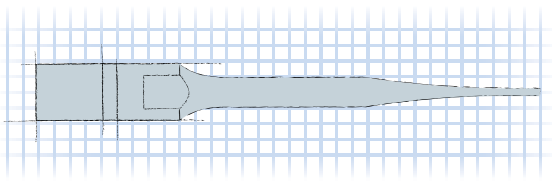
We have developed a new machining process that modifies the shape of the working edges for improved spray control:

- More powerful cavitation;
- Better spray control;
- Perfectly-controlled vibration energy at the end of the instrument.

Quality and traceability

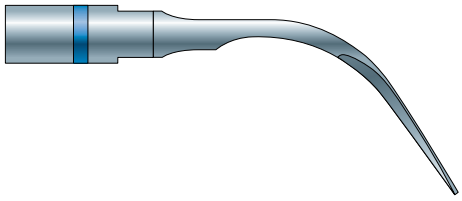
We specialize in micromechanics and the reliability of the instruments we manufacture is recognized worldwide:

- All alloy bars are marked with a batch number for better traceability from the start of production to the finished instrument;
- All production steps are monitored using statistically-validated samples;
- All tips are manually polished.



Tip no. 1-S

Tip no. 10Z



World premiere

Satelec developed and patented the first ever system of identification and selection of ultrasonic instruments according to their ideal power range.

From the time they start to design the prototypes, our engineers can predetermine the optimum power ranges of the instruments. The power settings are then refined and specified by clinical consultants in international working groups.

Just as burs used on the rotary instruments are coded to show their fixing method, the diameter of their working part and their length, our tips are also color coded.

Color Coding System (CCS tips)

Since 2004, **Satelec** instruments are color coded to show their recommended power range. The same color coding is displayed on the devices: P-Max Newtron® XS (LED), P5 Newtron® XS (LED) and the SP Newtron® (LED) module; as well as on the Suprasson® P5 Booster and the Prophy Max Newtron®.

- Low power and amplitude: **green**.
- Medium power and amplitude: **yellow**.
- High power and amplitude: **blue**.
- Very high power and maximum amplitude: **orange**.

The color marking resists cleaning in the ultrasound bath, ultrasonic vibrations, decontamination agents and sterilization, to a much higher degree than any other system available at present.

The markings have no effect on the performance of the **CCS tips** and the color coding is still visible when the tip is mounted on the handpiece.

Finally, the **CCS** system is completed with the wrenches (regular and dynamometric) that correspond to the tips by group or color code.

Advantages

- The color coding identifies the power that gives the best safety / performance ratio (no instrument breakages / amplitude and resistance to the ideal load).
- Immediate identification of the recommended power range on the ultrasonic generator display and on the instrument, available throughout the time of use.
- The individual wrenches and storage kits guard against the risk of cross contamination to the user and auxiliary staff
- The coding resists decontamination and sterilization.

Handpieces

The **Newtron®** handpiece is a piezoelectric transducer that offers a consistent performance despite the type of **Satelec** tip or treatment that you choose.

The composite materials used in the handpiece housing are also autoclave-safe.

The titanium amplifier (exclusive manufacturing process) provides the transducer with unequalled torque reliability and durability.

Our ultrasonic generators, which are controlled by the **SP Newtron** electronic module, boast the following features:

- The broadest range of frequencies on the market: 28 to 36 kHz;
- The broadest power range: 0.1W to 10W;
- The largest vibration amplitudes: 4 µm to 200 µm.

The automatic tuning control provides maximum performance while limiting transducer heating. The amplitude is electronically monitored approx. 30,000 times per second in real time, which is why **Newtron** handpieces generate homogeneous vibrations that are both more effective and more comfortable for the patient.

NEWTRON HANDPIECE

The new handpiece housing is made of a specially designed composite material that sustains sterilization in Class B autoclaves. The front section can be removed for better decontamination of the titanium amplifier.

NEWTRON LED HANDPIECE

Good visibility is essential. **Satelec** is the first manufacturer to offer autoclavable ultrasonic handpieces with integrated electro-luminescent diodes (LED light). The **Newtron LED**, a new-generation ultrasonic transducer, illuminates the operating area with “cold” light in a 360° radius at 65 000 Lux.

The light guide and the front part are removable and allow easy cleaning and decontamination of the handpiece. Comfort and ergonomics are two further advantages for the user.

Newtron LED handpiece

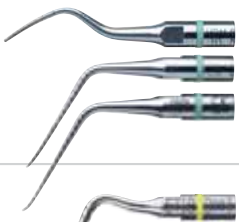
Newtron handpiece

Removable nozzle on Newtron and Newtron LED handpieces

Contents

1 - Ref. F00246
1-S - Ref. F00245
2 - Ref. F00247

10P - Ref. F00253
10X - Ref. F00359
10Z - Ref. F00254



H1 - Ref. F00366
H2L - Ref. F00367
H2R - Ref. F00368

H3 - Ref. F00369
H4L - Ref. F00114
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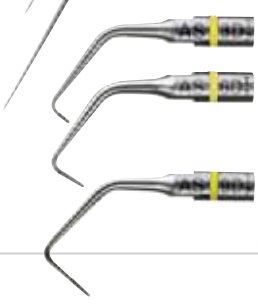
ET20D - Ref. F88013
ETBD - Ref. F88020

ET25 - Ref. F88018
ET25S - Ref. F88021
ET25L - Ref. F88022



AS3D - Ref. F00065
AS6D - Ref. F00079
AS9D - Ref. F00067

P14D - Ref. F00106
P15LD - Ref. F00107
P15RD - Ref. F00108

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ETPR - Ref. F88019

C20 - Ref. F00113
GI-1 - Ref. F02151

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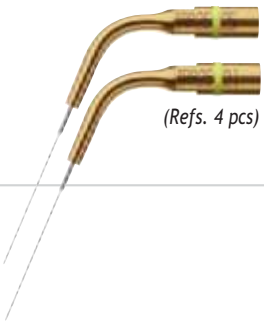
(Refs. 4 pcs)

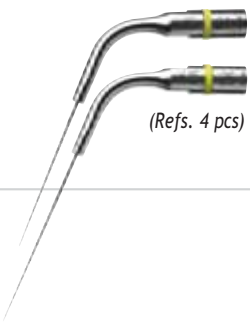
ET40 - Ref. F88012

ET40D - Ref. F88014

SO4 - Ref. F88009



IRR 25/21mm - Ref. F43805
IRR 25/25mm - Ref. F43806
IRR 20/21mm - Ref. F42807
IRR 20/25mm - Ref. F42808
(Refs. 4 pcs)



(Refs. 4 pcs)

K10/21 mm - Ref. F43710
K15/21 mm - Ref. F43715
K25/21 mm - Ref. F43725
K30/21 mm - Ref. F43730
K10/25 mm - Ref. F43712
K15/25 mm - Ref. F43717
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K30/25 mm - Ref. F43732

ASLD - Ref. F00080

ASRD - Ref. F00081

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PM4 - Réf. F02253

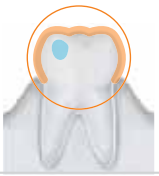
PMS1 - Ref. F02254
PMS2 - Ref. F02255
PMS3 - Ref. F02256

Prophylaxis

Periodontics

Endodontics

Surgical endodontics



Conservative
and restorative dentistry

Prophylaxis

Scaling

The instruments are used at high power (blue code).

To be effective, the tips must be oriented tangentially to the surface being treated and must be moved in a back-and-forth sweeping motion without excessive lateral pressure.

Ultrasonic tips make faster scaling possible and cause less damage to tooth surfaces than manual instruments. Numerous studies have shown that ultrasonic treatments are 20 to 50% faster than manual instrumentation procedures. (5, 29)

The push-pull system of the SP Newtron module provides more efficient, homogeneous vibrations by constantly and automatically adjusting power to the applied load. Amplitude and power are controlled and adjusted automatically in real time (exclusively patented to Satelec).

Advantages

- The micro-hardness of the exclusive alloy used for our tips respects the enamel and prevents damage to dental tissues
- Controlled power = guaranteed efficiency.
- Low lateral pressure = enhanced patient comfort.
- Spray Control System = more efficient, better-controlled spray.

The **no. 10Z tip** is marked with a gauge based on the principle of the Dutch Periodontal Screening Index (University of ACTA, Amsterdam/Belgian Association of Periodontology) to determine quickly the patient's state of health during prophylactic and initial treatments, or periodontal maintenance.

Please see page 22 for further information.

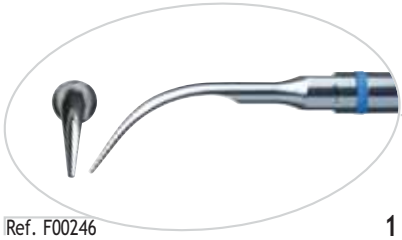
Scaling tips

These four supra- and sub-gingival scaling tips are ideal for treating commonly encountered cases (pockets <3-4mm).

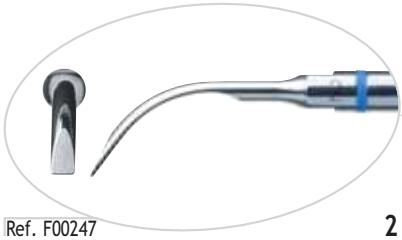
All tips come with the new **Spray Control System** (**Satelec** exclusive).

The tip must be oriented tangentially to the surface being treated and must be moved in a back-and-forth sweeping motion, over the whole surface, without excessive lateral pressure.

Thick deposits may require using the Boost mode for short periods (available on P-MAX Newtron® XS (LED)).

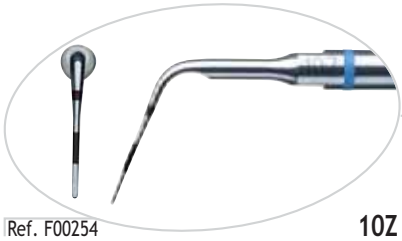


Ref. F00246 **1**



Ref. F00247 **2**

Ref. F00359 **10X**



Ref. F00254 **10Z**

POWER SETTINGS

	P-Max Newtron XS	P5 Newtron (LED) P5 Newtron XS (LED	P-Max Newtron (Lux) Prophy Max Newtron (Lux)	SP Newtron (LED/Lux)	Suprasson P5 Booster
No. 1 tip	14 to 15	14 to 15	8 to 10	7 to 8	7 to 9
No. 2 tip	14 to 15	14 to 15	8 to 10	7 to 8	7 to 10
No. 10X tip	12 to 14	12 to 14	6 to 8	6 to 7	7 to 8
No. 10Z tip	12 to 14	12 to 14	6 to 8	6 to 7	7 to 8

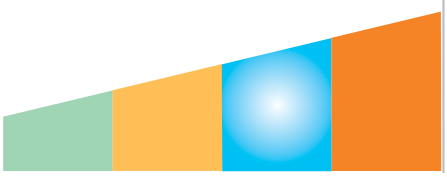
No. 1 tip: "Universal".
Recommended for treating simple cases and gross **supra-gingival scaling**. Orientation tangential to the tooth's surface. To-and-fro sweeping motion in order to "push" and "pull" calculus without damaging the enamel.

No. 2 tip: "Voluminous calculus".
Recommended for removing voluminous supra-gingival deposits. **Apply flat end to the tooth's surface.**

No. 10X tip: "Interproximal".
Recommended for the **treatment of interproximal spaces** and for supra-gingival scaling. Anatomic shape allows quick, efficient hand movements.

No. 10Z tip: "Sub-gingival".
This tip is particularly recommended for the **treatment** of patients who maintain good oral hygiene.
Biofilm and soft deposit removal, together with evaluation of health status, thanks to the tip's marking, are its main features.

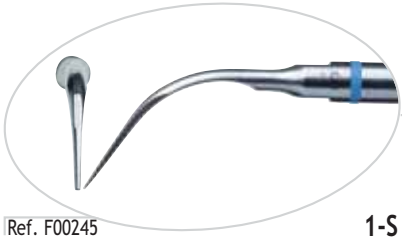
Color Coding System - Newtron Technology
Identification of power modes by color coding.



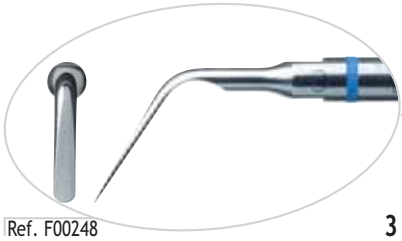
Scaling tips

The tip must be oriented tangentially to the surface being treated, parallel to the main axis of the tooth, and must be moved in a back-and-forth sweeping motion without excessive lateral pressure. Begin the treatment at the center of the dental face. Push or pull the calculus towards the mesial and distal margins.

Thick deposits may require using the Boost mode for short periods (available on P-MAX Newtron® XS (LED)).



Ref. F00245 **1-S**



Ref. F00248 **3**

Ref. F00253 **10P**

POWER SETTINGS

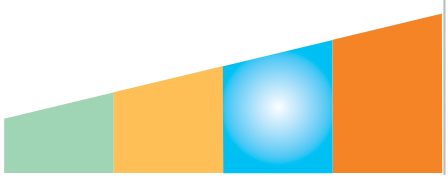
	P-Max Newtron XS	P5 Newtron (LED) P5 Newtron XS (LED	P-Max Newtron (Lux) Prophy Max Newtron (Lux)	SP Newtron (LED/Lux)	Suprasson P5 Booster
No. 1-S tip	14 to 15	14 to 15	8 to 10	7 to 8	7 to 10
No. 3 tip	14 to 15	14 to 15	8 to 10	7 to 8	7 to 8
No. 10P tip	14 to 15	14 to 15	8 to 10	7 to 8	7 to 8

No. 1-S tip: "Slim".
This tip was developed for supra- and sub-gingival scaling. **It has improved load resistance, and superior amplitude and power compared to the original tip.** The more effective lateral edges make it particularly suitable for scaling the interproximal spaces.

No. 3 tip: "Stains".
For removing discolorations and stains (tobacco, tea, coffee, etc.). The tip is used by placing the rounded end in contact with the surface to be treated.

No. 10P tip: "Shallow pockets".
Fine tip designed for **scaling shallow pockets** (<2-3mm). It provides greater irrigation than the other tips.

Color Coding System - Newtron Technology
Identification of power modes by color coding.



Periodontics

Periodontal debridement

The tips are used at low amplitude and power (green code).

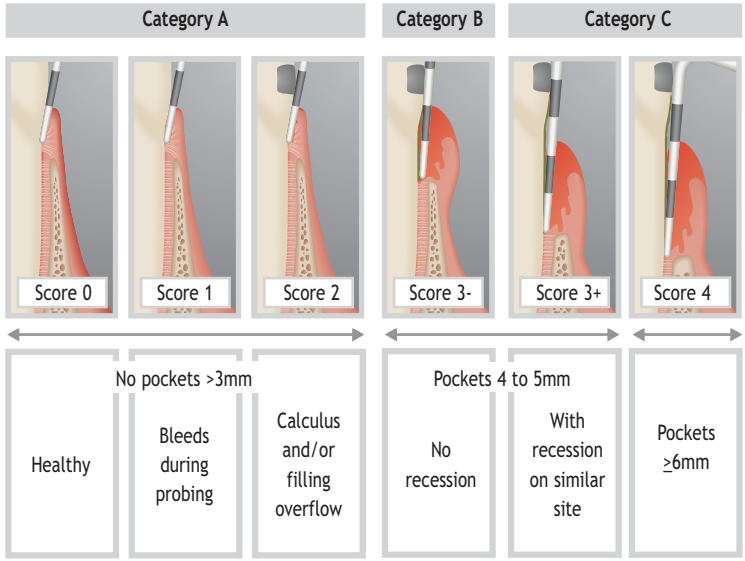
Satelec has developed specially designed micro-tips for more efficient mechanical treatments in accordance with the most recent research findings.

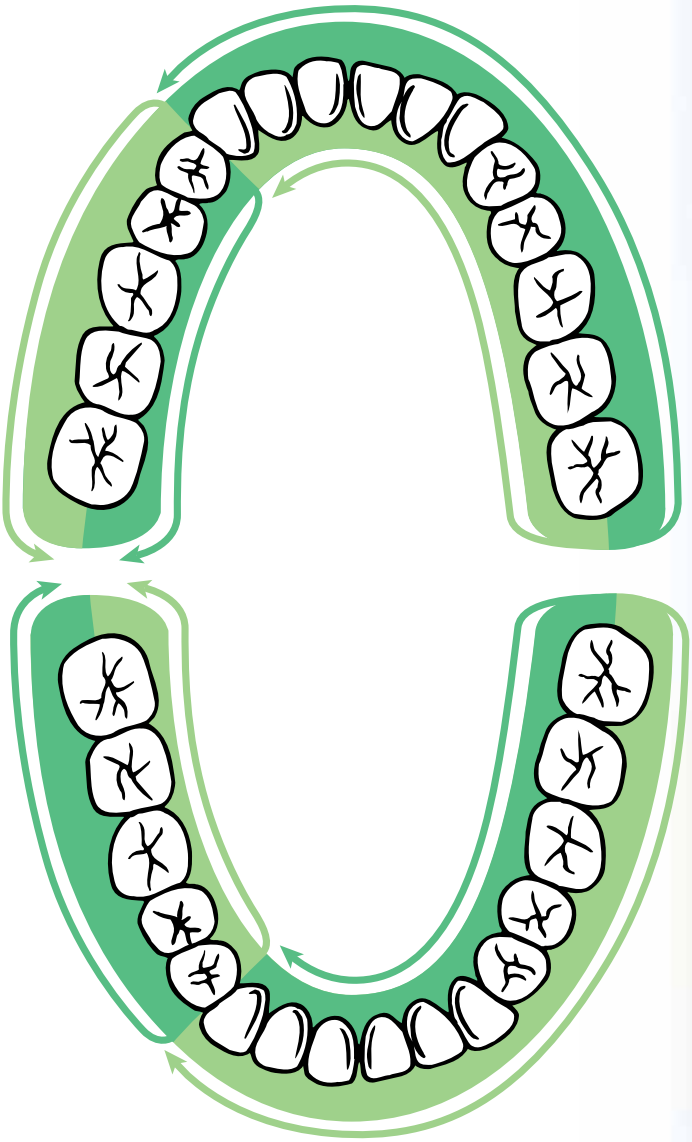
Non-surgical periodontal treatments are part of the etiological treatment phase in therapeutic strategies (2, 15, 18, 31) and are aimed at achieving the following results:

- Reducing gingival inflammation;
- Reducing pocket depth;
- Eliminating pathogenic bacteria and decontaminating root surfaces, making them more compatible with soft tissues;
- The best possible quality of tissue repair.

Non-surgical periodontal treatments are accessible to both general practitioners and specialists, and are aimed at removing microbial biofilms, which cause gingivitis and periodontitis. (6)

Dutch Periodontal Screening Index





H4L - H2L

H4R - H2R

Perio micro-tips

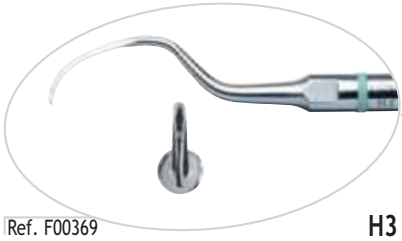
These micro-tips make it possible to perform a full-mouth periodontal debridement treatment. All the tips have a universal curette shape.

The distal surface of the last segment is at a 90° angle to the shaft. The end of the mini-tip has a quarter-loop to prevent blunt trauma. The double guiding edges remove calculus and deposits with no risk of damage to connective fibers. (7, 11, 14)

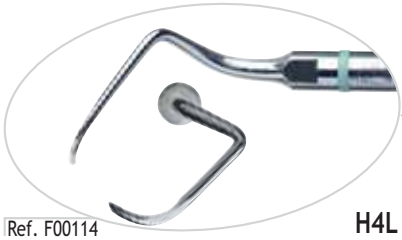
H4 tips are designed for sub-gingival scaling, non-surgical treatment of deep, narrow pockets (>4-6mm), and open treatments (flap surgery). Low pressure combined with a very low amplitude provide tactile sensitivity unequalled by any other ultrasonic tip.

The micro-tips operate in the opposite direction to manual curettes (ie. using a push stroke without scraping). They should be moved from the sulcular opening towards the bottom of the pocket without excessive lateral pressure (0.3 to 0.5N).

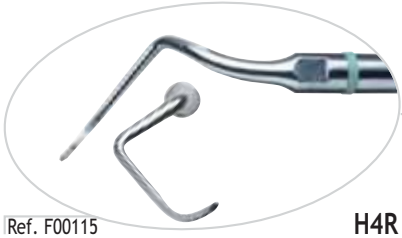
The calculus is removed by methodically crisscrossing all root surfaces, while the biofilm is mechanically disrupted and eliminated by irrigation. Residual deposits are removed from pockets and cementum surfaces are decontaminated by the bacteriostatic effect of micro-cavitation. (6, 7, 14)



Ref. F00369 **H3**



Ref. F00114 **H4L**



Ref. F00115 **H4R**

POWER SETTINGS

	P-Max Newtron XS	P5 Newtron (LED) P5 Newtron XS (LED	P-Max Newtron (Lux) Prophy Max Newtron (Lux)	SP Newtron (LED/Lux)	Suprasson P5 Booster
H3 tip	1 to 2	1 to 2	1 to 5	1 to 2	1 to 4
H4L tip	1 to 2	1 to 2	1 to 5	1 to 2	1 to 4
H4R tip	1 to 2	1 to 2	1 to 5	1 to 2	1 to 4

H3 tip: "Anterior teeth".

Ideal tip to begin with, for the **treatment of anterior teeth**. The guiding edge is used parallel to the pocket.

H4L tip: "Premolars and molars".

First tip in the sequence. Left angled. Recommended for the **treatment of all surfaces and furcations**:

- **Mandibular:** The lingual and mesial surfaces of sector 3, then the buccal and distal surfaces of sector 4. Pivoted at 43.
- **Maxillary:** The buccal and distal surfaces of sector 1, then the palatal and mesial surfaces of sector 2. Pivoted at 13.

H4R tip: "Premolars and molars".

Second tip in the whole-mouth sequence. Right angled. Follows the H4L tip in the treatment sequence. Recommended for the **treatment of all surfaces and furcations**:

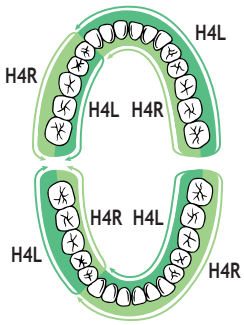
- **Mandibular:** Buccal and distal surfaces of sector 3, then lingual and mesial surfaces of sector 4. Pivoted at 43.
- **Maxillary:** The buccal and distal surfaces of sector 1, then the palatal and mesial surfaces of sector 2. Pivoted at 13.

Tip equivalents

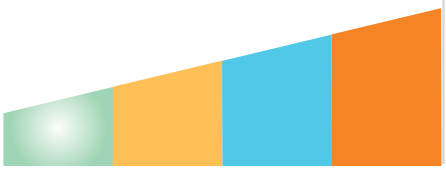
- **H3:**

  Anterior teeth and premolars. Replaces manual curettes nos. 1-2, 3-4, and 5-6.
- **H4L and H4R:**

  Premolars and molars. Replace manual curettes nos. 7-8, 9-10, 11-12, and 13-14.



Color Coding System - Newtron Technology
Identification of power modes by color coding.



Diamond-coated perio micro-tips

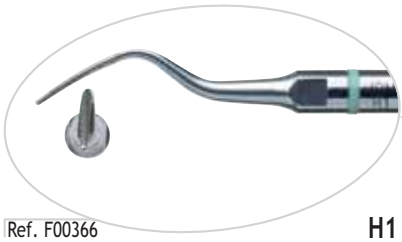
Diamond-coated micro-tips (350 to 400µm diameter, 30µm diamond grit size) which act as periodontal files are used in the second step following ultrasonic debridement.

They are designed to remove calculus from very narrow inter-root spaces and furcations and can be oriented vertically or horizontally to instrument the cementum surface down to the bottom of the pocket.

They are also recommended for the debridement of periodontal abscesses and for odontoplasty during non-surgical treatment. (6, 9, 11, 15)

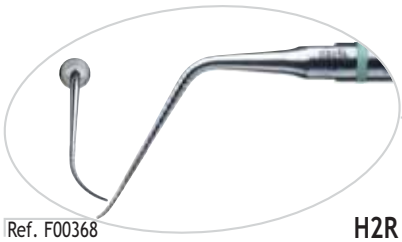
They are also used during surgical treatment to remove granulation tissue.

Diamond micro-tips are used with very low pressure (approximately 0.3N) and are inserted delicately, without forcing, to avoid over-instrumentation.



Ref. F00366 **H1**

Ref. F00367 **H2L**



Ref. F00368 **H2R**

POWER SETTINGS

	P-Max Newtron XS	P5 Newtron (LED) P5 Newtron XS (LED	P-Max Newtron (Lux) Prophy Max Newtron (Lux)	SP Newtron (LED/Lux)	Suprasson P5 Booster
H1 tip	1 to 2	1 to 2	1 to 5	1 to 2	1 to 3
H2L tip	1 to 2	1 to 2	1 to 5	1 to 2	1 to 3
H2R tip	1 to 2	1 to 2	1 to 5	1 to 2	1 to 3

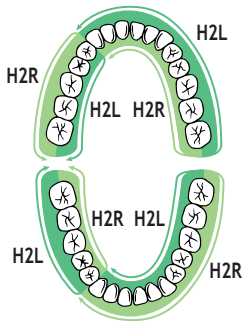
H1 tip: "Anterior teeth".
Diamond mini-probe recommended for simple cases. Used to treat **anterior teeth**.

H2L tip: Premolars and molars".
Left-angled diamond micro-probe. Recommended for **treating furcations and very narrow spaces**.

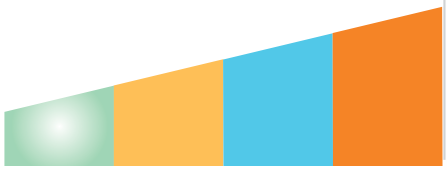
H2R tip: "Premolar and molar area".
Right-angled diamond micro-probe. Used for **treating furcations and very narrow spaces**

Instrument equivalents:

- **H1:**
  Anterior teeth and premolars.
  Replaces 3-7 perio files.
- **H2L and H2R:**
  Premolars and molars.
  Replace 5-11 and 9-10 perio files.



Color Coding System - Newtron Technology
Identification of power modes by color coding.



Periodontal and implant maintenance

The tips are used at low amplitude and power (green code).

The maintenance phase of ultrasonic treatments of pockets involves the use of new generation, blunt micro-tips. Treatment is virtually painless. The biofilm is mechanically disrupted by micro-cavitation. (29, 31)

The bacteriostatic capacity of ultrasound and irrigation combined with the hydrodynamic effect removes debris more efficiently than sub-gingival irrigation using a manual syringe.

Disinfectants like chlorhexidine combined with ultrasound are recommended to optimize pocket decontamination.

With the two kits of micro-tips available for the treatment of thin periodontium (PerioPrecision™) or supportive therapy (BDR), you can adapt to any clinical situation.

Instruments manufactured in composite-carbon reinforced material enable the maintenance of implants and prostheses.

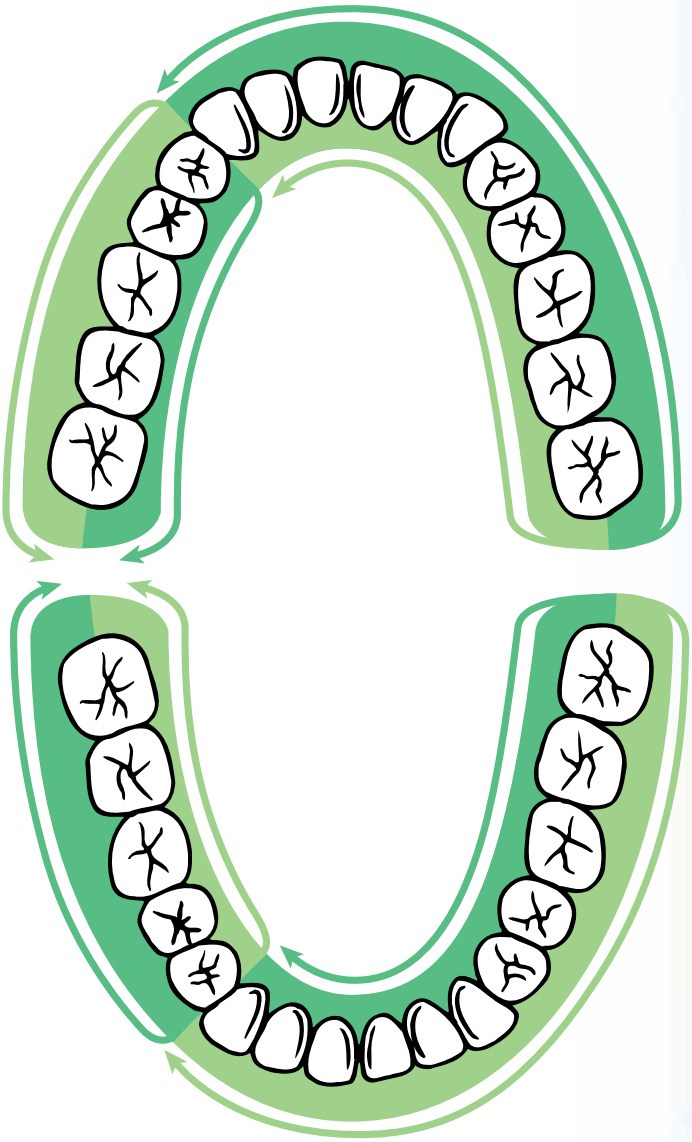
Studies have proven that the quality of periodontal maintenance using this new technique provides enhanced patient comfort and motivation. (15, 17)

Advantages

- Fine tips for easy access to the narrowest spaces and complex contours of deep pockets.
- Blunt shapes that prevent damage to cementum.
- Low amplitude for better tactile control and painless treatments.
- Micro-cavitation provides more effective sub-gingival irrigation thanks to the bacteriostatic effect.

The **TK1-1S and TK1-1L tips** are marked with a gauge based on the principle of the Dutch Periodontal Screening Index (University of ACTA, Amsterdam/Belgian Association of Periodontology) to determine quickly the patient's state of health during periodontal and implant maintenance.

Please see page 22 for further information.



P2L - TK2-1L - PH2L

P2R - TK2-1R - PH2R

PERIOPRECISION

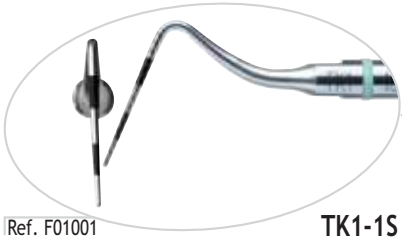
The new PerioPrecision kit consists of an autoclavable box including one probe tip recommended for initial therapy and two double-curved micro-tips.

The P2 tips feature an angled shaft in their middle- and end-portions. The angulation is open and allows easy access to even very thin pockets, in the distal areas.

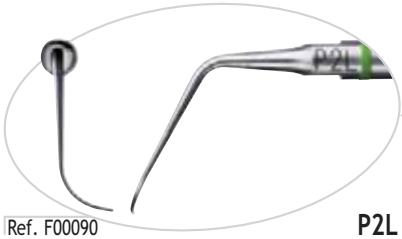
Thanks to their rounded shape the tips can be used safely, however, due to their thin diameters, caution is required.

They are the instruments of choice for thin periodontium debridement and maintenance, and the cleaning of very narrows areas.

Activated at low power, they generate almost no risk of lesions to the tissues. (10)



Ref. F01001 **TK1-1S**



Ref. F00090 **P2L**

Ref. F00091 **P2R**

POWER SETTINGS

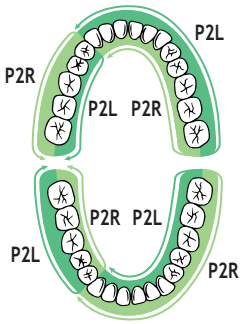
	P-Max Newtron XS	P5 Newtron (LED) P5 Newtron XS (LED	P-Max Newtron (Lux) Prophy Max Newtron (Lux)	SP Newtron (LED/Lux)	Suprasson P5 Booster
TK1-1S tip	1 to 2	1 to 2	1 to 5	1 to 2	1 to 3
P2L tip	2 to 5	2 to 5	2 to 6	2 to 5	2 to 4
P2R tip	2 to 5	2 to 5	2 to 6	2 to 5	2 to 4

TK1-1S tip: "probe tip".
The marking - every 3 mm - can help to make a diagnosis during pocket debridement and irrigation.
It is used **without excessive pressure** (neither vertical nor lateral), **following the contour of the pocket and brushing against the root surface**.

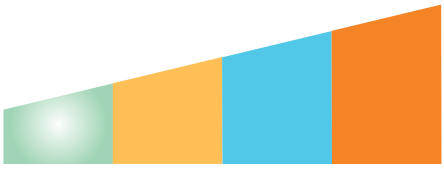
P2L tip: "premolars and molars".
Micro-tip dedicated to maintenance (very little or absence of calculus) it is **activated at a low power setting**, in order to preserve the tactile sense.
Left oriented.The spray can be adjusted to irrigate right to the bottom of the pocket.

P2R tip: "premolars and molars".

It is the complement of the previous tip, right oriented. Its double-curved design allows the treatment of difficult-to-reach areas (inter-radicular spaces, deep pockets...). It can be **used at high power for a short period of time to remove small deposits (calculus, cementum).**



Color Coding System - Newtron Technology
Identification of power modes by color coding.



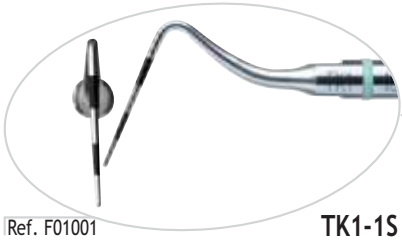
BDR micro-tips*

The four **BDR** micro-tips, in the shape of periodontal probes, are ideal for periodontal maintenance by dentists and dental hygienists.

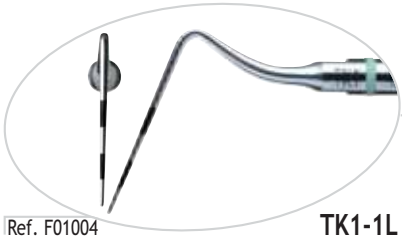
- Two straight probes for initial examinations and the treatment of simple cases.
- Two angled probes (left and right) for full-mouth maintenance in a single session and for the treatment of complex cases.

BDR micro-tips are used at low power with very low pressure to preserve tactile sensitivity. (7, 14, 17, 22)

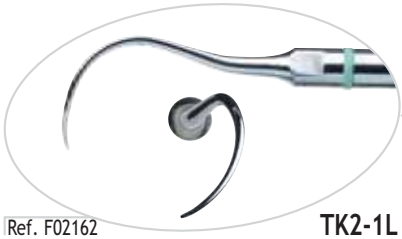
**Biofilm Disruption and Removal.*



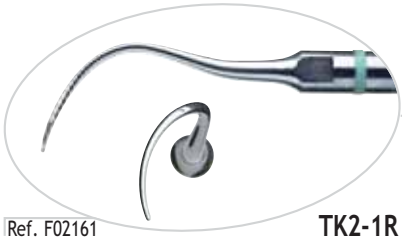
Ref. F01001 **TK1-1S**



Ref. F01004 **TK1-1L**



Ref. F02162 **TK2-1L**



Ref. F02161 **TK2-1R**

POWER SETTINGS

	P-Max Newtron XS	P5 Newtron (LED) P5 Newtron XS (LED	P-Max Newtron (Lux) Prophy Max Newtron (Lux)	SP Newtron (LED/Lux)	Suprasson P5 Booster
TK1-1S tip	1 to 2	1 to 2	1 to 5	1 to 2	1 to 3
TK1-1L tip	1 to 2	1 to 2	1 to 5	1 to 2	1 to 3
TK2-1L tip	1 to 2	1 to 2	1 to 4	1 to 2	1 to 3
TK2-1R tip	1 to 2	1 to 2	1 to 4	1 to 2	1 to 3

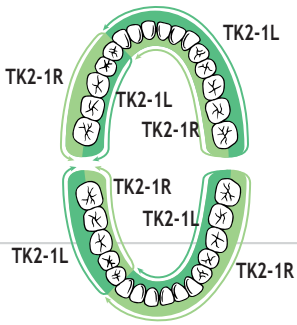
TK1-1S tip: "Short probe".
Micro-tip recommended for examining shallow to moderate pockets (<4mm) and for the **maintenance of simple cases.**

TK1-1L tip: "Long probe".
Micro-tip for examining and **maintenance of moderate to deep pockets** (>4mm).

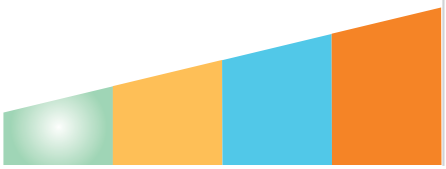
TK2-1L tip: "Premolars and molars".

Left-angled micro-tip recommended for **maintenance of moderate to deep pockets and furcations.**

TK2-1R tip: "Premolars and molars".
Complements the TK2-1L tip. Right-angled mini-tip used to **treat moderate to deep pockets and furcations.**



Color Coding System - Newtron Technology
Identification of power modes by color coding.



Periosoft™ micro-tips

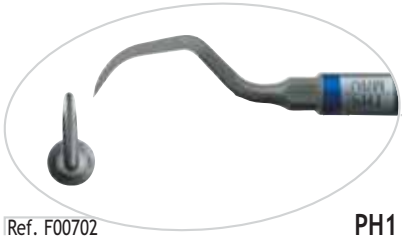
Carbon composite micro-tips are used at low amplitude and power (green code).

The goal of implant and prosthesis maintenance is to remove biofilm and loosely adhering deposits without scratching the surface of the prosthesis.

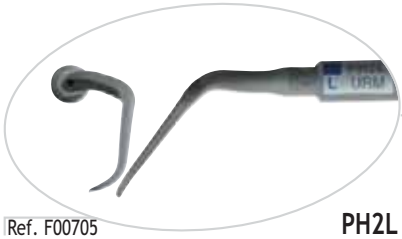
The **Periosoft** line is designed for implant and prosthesis maintenance. Surfaces are left undamaged, preventing the retention of bacterial deposits and reducing the risk of peri-implantitis (9, 21).

Periosoft carbon mini-tips are used to polish metal (gold, titanium) surfaces to reduce instrument marks. These micro-tips are also recommended for polishing ceramics and composite veneers without damaging the materials.

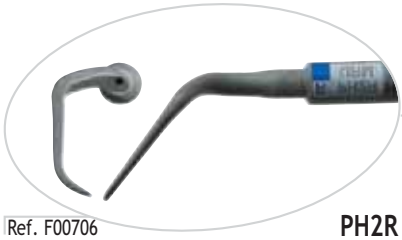
The tips' ends are extremely fragile and care must be taken to avoid jamming them or using excessive force which could result in breakage. **These tips are used with as little lateral pressure as possible and treatments are totally painless.**



Ref. F00702 **PH1**



Ref. F00705 **PH2L**



Ref. F00706 **PH2R**

POWER SETTINGS

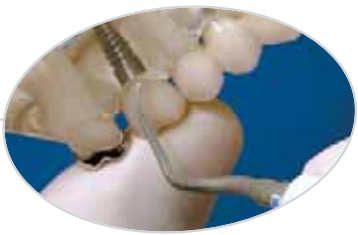
	P-Max Newtron XS	P5 Newtron (LED) P5 Newtron XS (LED	P-Max Newtron (Lux) Prophy Max Newtron (Lux)	SP Newtron (LED/Lux)	Suprasson P5 Booster
PH1* tip	1 to 2	1 to 2	1 to 3	1 to 2	1 to 3
PH2L* tip	1 to 2	1 to 2	1 to 3	1 to 2	1 to 3
PH2R* tip	1 to 2	1 to 2	1 to 3	1 to 2	1 to 3

**Pack of four tips.*

PH1 tip: "Anterior teeth".

Universal curette shape. Easy to use in most treatments, particularly **anterior teeth**. Can also be used to polish the sulcus and grooves of natural teeth.

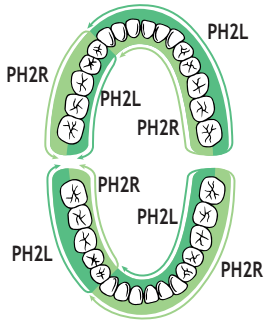
PH2L tip: "Premolars and molars".
Shape comparable to 13-14 curettes. **Recommended for posterior teeth.**



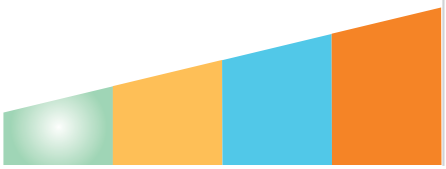
PH2R tip: "Premolars and molars".
This carbon tip **PH2R** is also used for **posterior teeth.**

Advantages

- Gentle on prosthetic surfaces (titanium, ceramic, composite).
- Eliminate biofilm and bacterial deposits.
- Micro-cavitation provides sulcular irrigation and bacteriostatic effect.



Color Coding System - Newtron Technology
Identification of power modes by color coding.



Endodontics

Non-surgical endodontics

Orthograde endodontics have been revolutionized by the combination of magnified vision (loupes, operating microscope) and the use of micro-ultrasonic tips.

Over the last twenty years, treatments that were previously exclusively performed by specialists have become accessible to the general practitioner, in complete safety and with the best success rate, thanks to the new instrumentation. (12)

Micro-ultrasonic instrumentation is an ideal complement to the manual armamentarium, burs and continuous rotary instrumentation:

- **overhangs,**
- **pulp stones,**
- **filling material,**
- **hidden canals,**
- **broken instruments**

are no longer a problem.

Every dentist, equipped with the proper instruments, can perform very good *minimally invasive* endodontics.

Satelec has provided the practitioner with the most innovative line of instruments: an extensive choice of exclusive alloys and coatings specially adapted to each sequence of the procedure.

Avantages

- Fine but resistant micro-instruments in exclusive alloys (*Titanium-Niobium*, etc.).
- Diamond coatings for stronger abrasion power.
- Complete line of instruments, suitable for all clinical circumstances.
- **Suprasson** and **Newtron** technology for ultrasonic generators with unbeatable performance.

ENDO success RETREATMENT

The **EndoSuccess™** Retreatment kit addresses the most commonly met situations encountered during endodontic treatment or non-surgical retreatment.

The alloys used for this line of micro-tips have been chosen for the specific conditions under which the instruments are used in the course of this type of clinical application.

The use of the new *Titanium-Niobium* alloy is a major innovation, providing unsurpassed ultrasonic performances in the most delicate circumstances.

It has an alpha-beta microcrystalline structure which provides the best stability/time ratio under intensive usage.

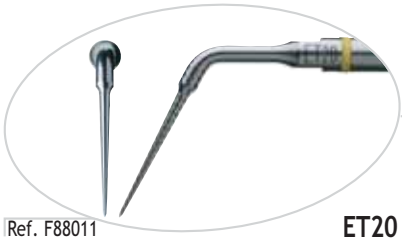
With a three-micron diameter, three to four times smaller than that of standard steel, the grain of the metal gives **unsurpassed ultrasound transmission**, allowing the practitioner the freedom to work at high power and keep the efficiency and resistance required.

The **Newtron** technology in **Satelec** piezoelectric generators gives the tips unbeatable efficiency. The instruments are driven with great precision and respond faithfully to the power settings chosen by the practitioner.

They are also compatible with all the **Suprasson** generators.

Ref. F88020 **ETBD**

Ref. F88017 **ET18D**



Ref. F88011 **ET20**

Ref. F88019 **ETPR**

POWER SETTINGS

	P-Max Newtron XS	P5 Newtron (LED) P5 Newtron XS (LED	P-Max Newtron (Lux) Prophy Max Newtron (Lux)	SP Newtron (LED/Lux)	Suprasson P5 Booster
ETBD tip	6 to 9	6 to 9	5 to 9	3 to 4	6 to 8
ET18D tip	6 to 10	6 to 10	5 to 10	3 to 5	6 to 10
ET20 tip	6 to 10	6 to 10	5 to 10	3 to 5	6 to 10
ETPR tip	20	20	10	10	14

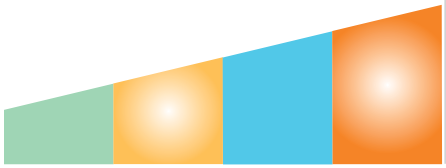
ETBD tip: "Endo Treatment, Ball Diamond tip". This tip is used to **locate canals** (calcified canals) and **explore the floor of the pulp chamber**. The diamond ball gives rapid and precise action in situations where the round bur cannot be used or is too invasive. Instrument can be used with irrigation.

ET18D tip: "Endo Treatment, diamond-coated".
This tip is for use in the pulp chamber to **eliminate dental overhangs**, intra chamber calcifications (pulp stones), temporary fillings and some filling materials. The tip can be used with irrigation.

ET20 tip: "Endo Treatment".
Instrument used for **interventions in the coronal third, to remove root canal fillings**, broken instruments or dental debris. The tip is for use with or without irrigation.

ETPR tip: "Endo Treatment, Post Removal".
Tip for **loosening root canal retention pins**. It is used to **extract prosthetics** with the integrated irrigation, at maximum power and in contact with the element to be loosened.

Color Coding System - Newtron Technology
Identification of power modes by color coding.



ENDO success RETREATMENT

The **EndoSuccess** kit of ultrasonic tips features a novel type of *Titanium-Niobium* (Ti-Nb) instruments, the **ET25** tips, specially adapted to endodontic retreatment, and in particular, the retrieval of broken instruments:

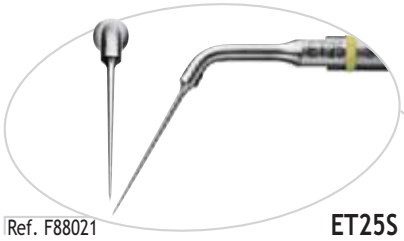
- Strong resistance to corrosion enables the tips to be used with sodium hypochlorite (NaOCl).
- Better transmission and better control of the ultrasonic vibration, compared to the stainless steel tips.
- Tips can be pre-bent and adjusted for the treatment of curved canals.

Ti-Nb is an exclusive, internationally patented alloy, whose crystal structure is particularly well-adapted to use with ultrasonics:

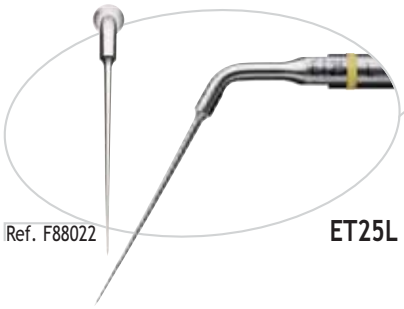
- Remarkable transmission of ultrasonics.
- Very thin ("pin-type") instruments, very high level of resistance.
- Perfect combination of flexibility, power and precision.

The "25" series of Ti-Nb tips are available in three dimensions to cover all types of situation.

Ref. F88018 **ET25**



Ref. F88021 **ET25S**



Ref. F88022 **ET25L**

POWER SETTINGS

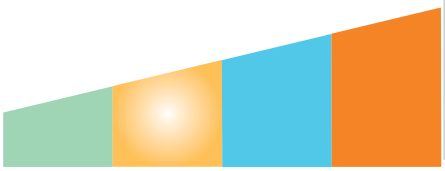
	P-Max Newtron XS	P5 Newtron (LED) P5 Newtron XS (LED	P-Max Newtron (Lux) Prophy Max Newtron (Lux)	SP Newtron (LED/Lux)	Suprasson P5 Booster
ET25 tip	6 to 10	6 to 10	5 to 10	3 to 5	6 to 10
ET25S tip	6 to 10	6 to 10	5 to 10	3 to 5	6 to 10
ET25L tip	6 to 10	6 to 10	5 to 10	3 to 5	6 to 10

ET25 tip: "Endo Treatment".
This micro-tip in *Titanium-Niobium* has been designed for the **most delicate interventions in the medium and apical thirds** of the canal. Conicity: 3%. It is ideal for eliminating broken instruments and silver points. It has a spray orifice for irrigation. (27)

ET25S tip: "Short".
This *Titanium-Niobium* micro-tip is especially **suited for retreatment in the coronal third** and the isthmus. Conicity: 4%. It has a spray orifice for irrigation.

ET25L tip: "Long".
Micro-tip in *Titanium-Niobium* recommended for **retreatment in the apical third of long and straight canals**. Conicity: 3%. Can be used with or without spray.

Color Coding System - Newtron Technology
Identification of power modes by color coding.



Root Canal Preparation, Ultrasonic Irrigation

Since the 1980s, ultrasonic instruments have helped improve endodontic treatments. Debridement, irrigation, retreatment, and surgery have all benefited from advancements in ultrasonic technology. (30)

Advantages

- Respects the root canal path and the endodontic taper.
- Low pressure + appropriate tip = tissue preservation.
- Quicker preparations made by diamond micro-tips.

EXCLUSIVE

PASSIVE ULTRASONIC IRRIGATION (PUI)

IrriSafe™ is designed for the removal of the smear layer, dentine debris and bacteria from the root canal system. The IrriSafe ultrasonic instruments are designed to perform the Passive Ultrasonic Irrigation (PUI) protocol, ideally combined with Sodium hypochlorite (NaOCl). (1, 20, 23, 27)

Ultrasonic files and IrriSafe instruments are mandatory for root canal cleaning: the hydrodynamic and bacteriostatic characteristics of the ultrasonic vibration, together with the disinfecting solutions are necessary to clean thoroughly the whole canal system from the pulp chamber to the apical constriction. (19)

Advantages

- **removal of dentinal debris, pulp tissue and bacteria.**
- **reinforced irrigant efficiency, due to the thermal effect.**
- **non-cutting instrument, featuring parallel flanks and a blunt end, to protect the canal anatomy.**

Endo tips

The Endo micro-tips are used during root canal preparations and irrigation. The series is comprised of specific instruments for endodontic retreatment and diamond-tipped mini-tips which can be used as alternatives to smooth instruments, depending on the case and the techniques habitually used by the practitioner.

The **ET** tip is used to remove dental pulp concretions and prepare for loosening root canal retention pins. (30)

The **SO4** tip is used for the lateral condensation of gutta percha.

Ref. F88013 **ET20D**

Ref. F88012 **ET40**

Ref. F88014 **ET40D**

Ref. F88009 **SO4**

POWER SETTINGS

	P-Max Newtron XS	P5 Newtron (LED) P5 Newtron XS (LED	P-Max Newtron (Lux) Prophy Max Newtron (Lux)	SP Newtron (LED/Lux)	Suprasson P5 Booster
ET20D tip	6 to 10	6 to 10	5 to 10	3 to 5	6 to 10
ET40 tip	6 to 10	6 to 10	5 to 10	3 to 5	5 to 10
ET40D tip	6 to 10	6 to 10	5 to 10	3 to 5	5 to 10
SO4 tip	7 to 8	7 to 8	7 to 8	4 to 5	6 to 8

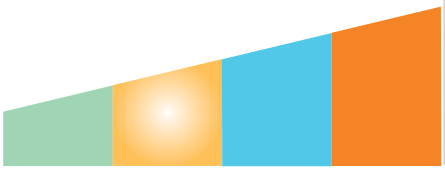
ET20D tip: "Retreatment".
Used in the coronal third, it is a diamond-coated version of the **ET20** with enhanced cutting and abrasive power laterally. Particularly useful for removing very hard **materials when "brushing" the parietal walls.**

ET40 tip: "Retreatment".
Quickly removes obstructions and broken instruments in the middle and apical thirds of large and straight canals.

ET40D tip: "Retreatment".
Diamond-coated version of the **ET40** for the **retreatment of extremely hard materials**. The most powerful of the retreatment tips.

SO4 tip: "Fine condensation tip".
Lateral condensation due to the thermal effect, when activated without spray.

Color Coding System - Newtron Technology
Identification of power modes by color coding.



IRRISAFE

Ultrasonic irrigation is essential for efficient cleaning and disinfection of the root canal.

Satelec recommends the **IrriSafe** instruments for **Passive Ultrasonic Irrigation (PUI), the safe removal of the smear layer, dentine debris and bacteria from the root canal.**

The instrument's shape improves micro-streaming and micro-cavitation in fluids. Non-cutting rounded end prevents damage to the apical constriction. (1, 16, 20, 23, 24, 25, 26, 27)

The protocol of the Passive Ultrasonic Irrigation (PUI) can be performed with any Satelec piezo ultrasonic generator equipped with the "endo" mode, although the SP Newtron™ driven units will provide the greatest efficiency

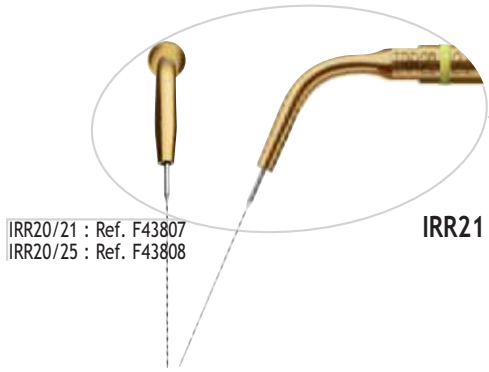
RECOMMENDATIONS

(ACTA University - Amsterdam, The Netherlands) :

1- Inject 20cc of Sodium Hypochlorite in the root canal and activate the **IrriSafe** for 20 seconds, while gently with drawing the instrument.

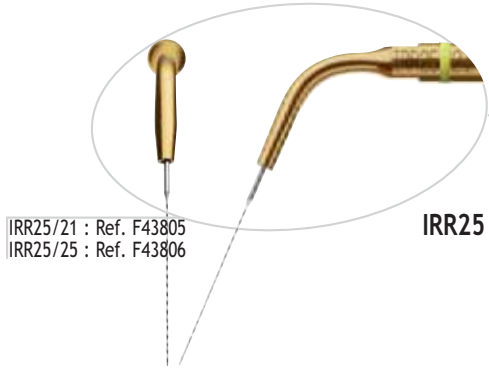
2- Renew the irrigant and perform in the same way, at least two more times,

3- or at least until no smear layer or debris remains visible in the solution, when it is activated by the ultrasonics.



IRR20/21 : Ref. F43807
IRR20/25 : Ref. F43808

IRR21



IRR25/21 : Ref. F43805
IRR25/25 : Ref. F43806

IRR25

POWER SETTINGS

	P-Max Newtron XS	P5 Newtron (LED) P5 Newtron XS (LED)	P-Max Newtron (Lux) Prophy Max Newtron (Lux)	SP Newtron (LED/Lux)	Suprasson P5 Booster
IRR 20/21*	9 to 11	9 to 11	4 to 7	3 to 4	4 to 6
IRR 20/25*	9 to 11	9 to 11	4 to 7	3 to 4	4 to 6
IRR 25/21*	9 to 11	9 to 11	4 to 7	3 to 4	4 to 6
IRR 25/25*	9 to 11	9 to 11	4 to 7	3 to 4	4 to 6

**Pack of four instruments.*

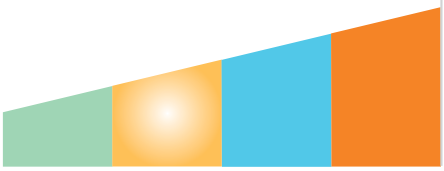
IrriSafe 20/21 and IrriSafe 20/25 : Use on medium power setting for 1-3 minutes' irrigation at the end of the root canal preparation.

- Continuous (3 minutes) or intermittent flushing (3 x 1 minute) with the irrigant, provides PUI efficiency.
- NaOCl is the recommended irrigant.
- **IrriSafe is inserted 2 mm short of the working length.**
- **IrriSafe must vibrate freely in the canal orifice.**

IrriSafe 25/21 and IrriSafe 25/25 : may be used in juvenile canals; or after initial irrigation with IrriSafe 20/21 or IrriSafe 20/25. **IrriSafe instruments are designed with a weak point located coronally** that allows for easy retrieval of the active part of the instrument, in case of accidental breakage: **simply irrigate the canal with a syringe and the broken part will be flushed out of the canal.**

Photo, high speed camera Dr Fridus van der Weijden (ACTA, The Netherlands), in *The Power of Ultrasonics*. © Quintessence France-2007.

Color Coding System - Newtron Technology
Identification of power modes by color coding.



Ultrasonic files

The ultrasonic files are used with:

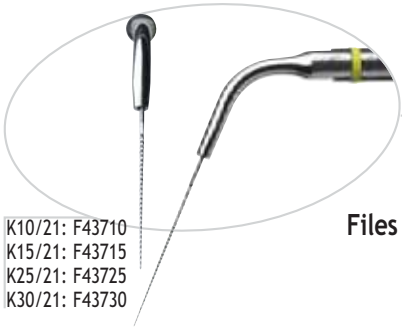
- a disinfecting solution or Salvizol EDTA® per-op, or
- with sodium hypochlorite for decontamination and the final cleaning.

The canal is irrigated until the smear layer is completely removed. Great care should nevertheless be exercised when irrigating the canal.

For passive irrigation, we would recommend the new IrriSafe instruments.

In orthograde treatment, they act as "needle" tips. When activated "dry" (without spray), they allow the removal of filling material (gutta percha).

In retrograde treatment, preshaped, they enable delicate cleaning of narrow canals, with no risk of causing parietal damage.



Files

K10/21: F43710
K15/21: F43715
K25/21: F43725
K30/21: F43730

POWER SETTINGS

	P-Max Newtron XS	P5 Newtron (LED) P5 Newtron XS (LED)	P-Max Newtron (Lux) Prophy Max Newtron (Lux)	SP Newtron (LED/Lux)	Suprasson P5 Booster
Files*	6 to 7	6 to 7	4 to 7	3 to 4	4 to 7

**Pack of four files.*

Ultrasonic files: "Irrigation".

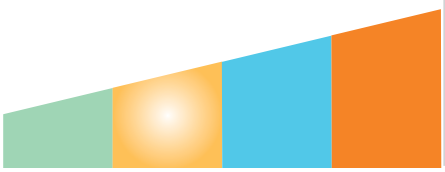
- **K10/21, K10/25 files: initial irrigation.**
- **K15/21, K15/25 files: final irrigation.**
- **K25/21, K25/25 files: final irrigation** wide canals.
- **K30/21, K30/25 files:** irrigation of **wide or juvenile canals.**

Caution! Ultrasonic files are cutting instruments; even the working end is active. Use them with caution to avoid ledges and false routes.

The files are available in 21 and 25mm lengths.

Color Coding System - Newtron Technology

Identification of power modes by color coding.



Surgical endodontics

Apicoectomy and micro-surgery

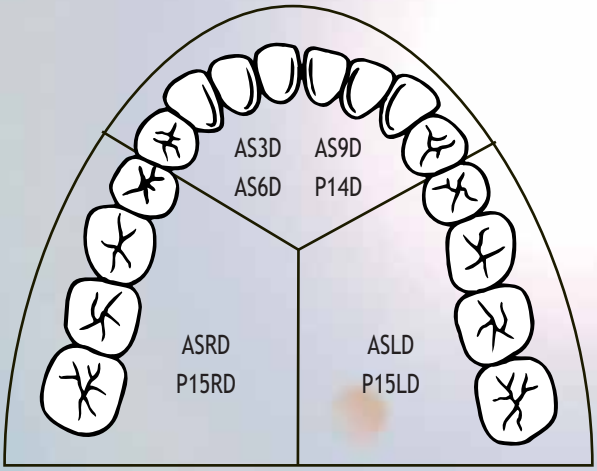
For over 20 years, the use of ultrasonic instruments has enabled the most effective clinical protocols in endodontic surgery. Minimally-invasive treatments are now routine and the preservation of tissue promotes rapid healing.

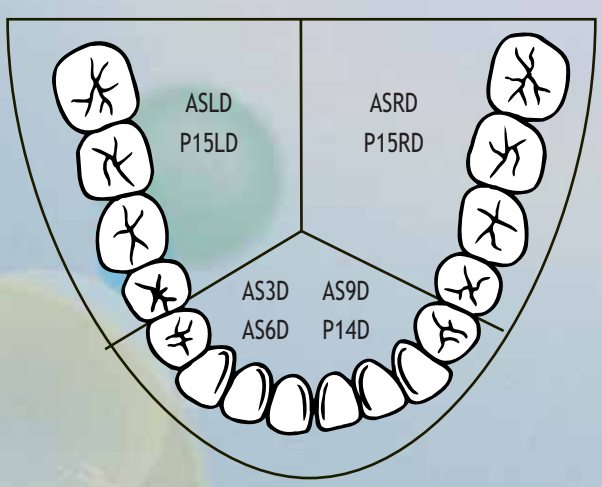
Satelec was the first manufacturer to define diamond-coated micro-tips with enhanced cutting power compared to smooth instruments or micro-burs, thereby enabling retropreparation without any risk of micro-fracture in the periapical walls.

The canal is prepared faster, without excessive pressure and more precisely thanks to the new instrument design.

Advantages

- Excellent quality of diamond coating allows for enhanced cutting power.
- New micro-tip design, better adapted to the canal's shape.
- Easy and efficient instrument sequence for better micro-surgery.


AS3D
AS9D
AS6D
P14D
ASRD
P15RD
ASLD
P15LD


ASLD
P15LD
ASRD
P15RD
AS3D
AS9D
AS6D
P14D

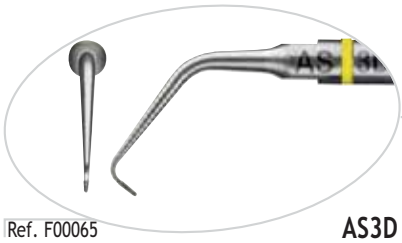
NEW

ENDO success
APICAL SURGERY

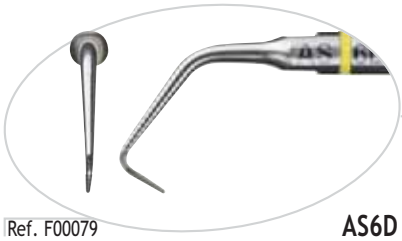
The new concept for micro-apical surgery, called 3-6-9, is exclusive to **Satelec** and follows the current trend towards minimally-invasive surgical techniques.

A kit of five instruments is designed to address all anatomical configurations. Together with a new **diamond coating** that enhances the instruments' efficacy, these tips not only allow for more precise and better controlled retro endodontic treatment, but also conserve more bone and dental tissues. The root canal is preserved, even though the infection is treated at its origin in the canal system. (13)

These instruments are recommended for use by Endodontists or dental professionals trained in the use of operating microscopes.

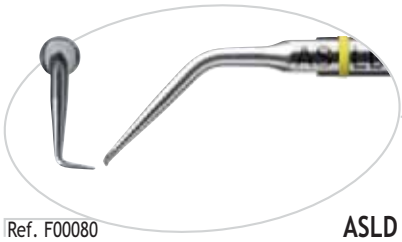


Ref. F00065 **AS3D**

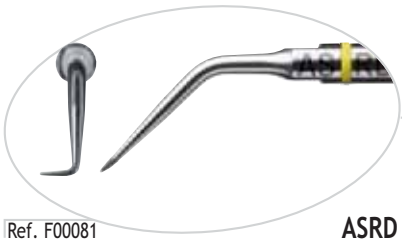


Ref. F00079 **AS6D**

Ref. F00067 **AS9D**



Ref. F00080 **ASLD**



Ref. F00081 **ASRD**

POWER SETTINGS

	P-Max Newtron XS	P5 Newtron (LED) P5 Newtron XS (LED)	P-Max Newtron (Lux) Prophy Max Newtron (Lux)	SP Newtron (LED/Lux)	Suprasson P5 Booster
AS3D tip	3 to 5	3 to 5	2 to 5	1 to 3	2 to 3
AS6D tip	3 to 5	3 to 5	2 to 5	1 to 3	2 to 3
AS9D tip	5 to 7	5 to 7	5 to 7	2 to 4	4 to 5
ASLD tip	6 to 9	6 to 9	5 to 9	3 to 5	6 to 9
ASRD tip	6 to 9	6 to 9	5 to 9	3 to 5	6 to 9


AS3D tip: Working length: 3 mm.

Universal apical surgery tip, first instrument of the sequence, recommended for the treatment of anterior teeth.

Caution: this instrument must be used without excessive pressure, at the lowest possible efficient power setting.


AS6D tip: Working length: 6mm.
Second instrument of the sequence, it is recommended to obtain at least 5mm preparation depth.
Caution: this instrument must be used without excessive pressure, at the lowest possible efficient power setting.


AS9D tip: Working length: 9mm.

Complicated cases - allows the preparation of the root canal up to the coronal third.

Caution: the tip should first be introduced inside the cavity and oriented, prior to being activated, according to the root axis, to avoid the preparation of a "false route".


ASLD tip: Working length: 3mm.

Left oriented micro-tip, premolars.

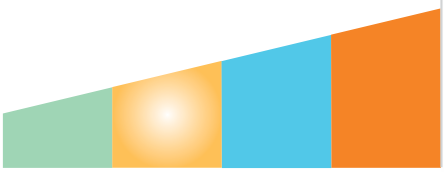
Caution: use the instrument without excessive pressure.


ASRD tip: Working length: 3mm.

Right oriented micro-tip, premolars.

Caution: use the instrument without excessive pressure.

Color Coding System - Newtron Technology
Identification of power modes by color coding.



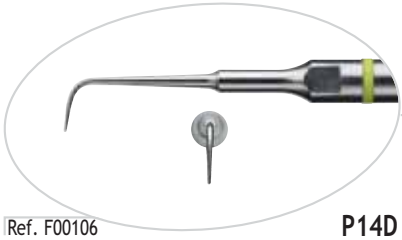
Diamond-coated retro micro-tips

The "**P**" series of micro-tips were developed with the support of French and Italian Endodontists.

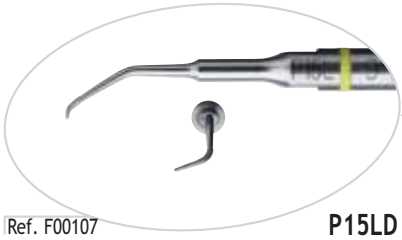
It contains three micro-tips for preparing cavities and isthmuses.

All of these tips are used at medium power with controlled pressure (the lightest possible) to avoid unnecessary tissue removal and micro-fractures of periapical walls. (3)

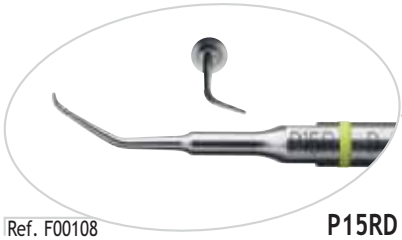
The working sector has been lengthened, for improved in-depth cleaning (Max. working length = 5mm).



Ref. F00106 **P14D**



Ref. F00107 **P15LD**

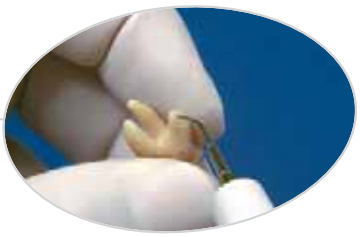


Ref. F00108 **P15RD**

POWER SETTINGS

	P-Max Newtron XS	P5 Newtron (LED) P5 Newtron XS (LED	P-Max Newtron (Lux) Prophy Max Newtron (Lux)	SP Newtron (LED/Lux)	Suprasson P5 Booster
P14D tip	6 to 8	6 to 8	5 to 8	3 to 5	5 to 8
P15LD tip	6 to 8	6 to 8	5 to 8	3 to 5	5 to 8
P15RD tip	6 to 8	6 to 8	5 to 8	3 to 5	5 to 8

P14D tip: "Universal".
Recommended for preparing **canals of anterior teeth.**

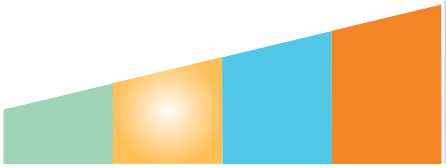


P15LD tip: "Left-angled".

Recommended for preparing **canals of premolars and molars.**

P15RD tip: "Right-angled".
Same use as the **P15LD** tip for **preparing canals of premolars and molars.**

Color Coding System - Newtron Technology
Identification of power modes by color coding.



Conservative and restorative dentistry

The **Satelec** range now includes three kits of micro-tips, presented in autoclavable stainless steel containers, to offer an even wider choice of conservative dentistry care.

As a result of controlled and tightly monitored surface treatment, combined with the **Newtron** technology of **Satelec** piezoelectric generators, and their innovative design, these mini-tips can be used on high power (blue code).

- The **Excavus™** kit consists of five ultrasonic tips for minimally invasive excavation that allows you to achieve small-volume proximal cavities while preserving the integrity of adjacent teeth and healthy structures.
- **Perfect'Margin™ kits:** this series of instruments is available in two sets, consisting of four ultrasonic tips which allow a delicate penetration of the sulcus, protecting the marginal gingiva and the biological width at the same time. The precision provides a better quality impression and a better cervical adjustment of the prosthesis.
- **GI-1 tip:** glass ionomer condensation is possible with Satelec ultrasonic generators, which deliver sufficient energy for accelerating hardening procedures, through the transmission of vibrations.
- **Piezocem tip:** the tip combined with ultrasonic vibrations fluidifies thixotropic cements and allows the sealing of inlays and onlays, for a precise prosthetic reconstitution, without excessive pressure.
- **5AE and ETPR tips:** loosening of metal crowns and root posts.

Advantages

- Instruments designed for minimally invasive, but faster, treatment mean that adjacent teeth and healthy structures are preserved.
- Powerful ultrasonic energy for condensation of glass ionomer and inlay/onlay sealing procures longer-lasting, more regular results, with better resistance to acid etching.
- Prostheses and bridges are loosened more quickly
- Root canal posts can be loosened during endodontic retreatment procedures.

EXCAVUS

Ultrasonic tips for minimally invasive excavation

This complete range of **Excavus** ultrasonic micro-tips is ideal for **creating small-volume proximal cavities** that take into account the demands of and performance expected from adhesive conservative dentistry.

The distinctive geometry of each tip guarantees its efficiency in even the most difficult operating situations, **while preserving the integrity of adjacent teeth and healthy structures for improved patient comfort.**

The diamond used for coating the tips features extremely regular particles with excellent impact resistance and highly homogeneous statistical distribution (± 5% of the median). **These characteristics give the tips exceptional preparation qualities without clogging or temperature rise that could be detrimental to biological tissue.**

The **Excavus** micro-tips are used at high power (blue code). We recommend storing them in their autoclavable stainless steel presentation container to facilitate the treatment sequence.

Ref. F02040 **EX1**

Ref. F02041 **EX2**

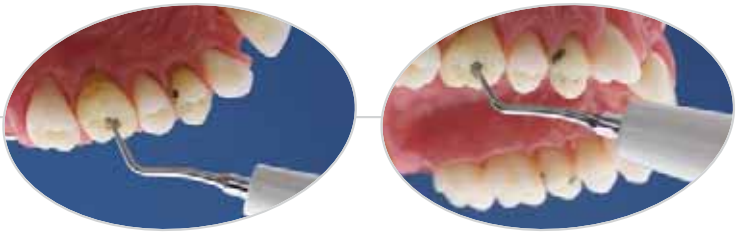
Ref. F02042 **EX3**

Ref. F02044 **EXL**

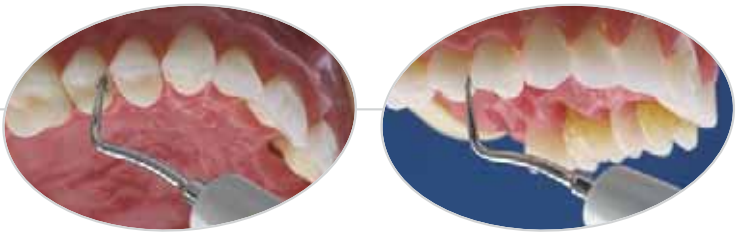
Ref. F02043 **EXR**

POWER SETTINGS

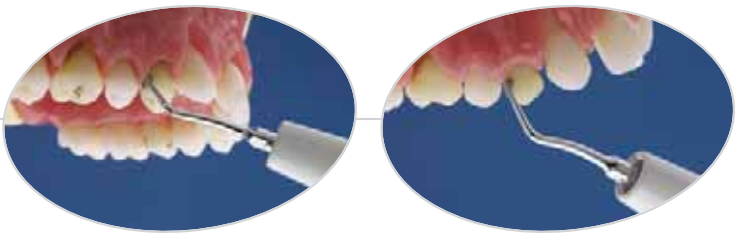
	P-Max Newtron XS	P5 Newtron (LED) P5 Newtron XS (LED)	P-Max Newtron (Lux) Prophy Max Newtron (Lux)	SP Newtron (LED/Lux)	Suprasson P5 Booster
EX1 tip	11 to 14	11 to 14	1 to 5	6 to 7	6 to 8
EX2 tip	11 to 14	11 to 14	1 to 5	6 to 7	6 to 8
EX3 tip	11 to 14	11 to 14	1 to 5	6 to 7	6 to 8
EXL tip	11 to 14	11 to 14	1 to 5	6 to 7	6 to 8
EXR tip	11 to 14	11 to 14	1 to 5	6 to 7	6 to 8



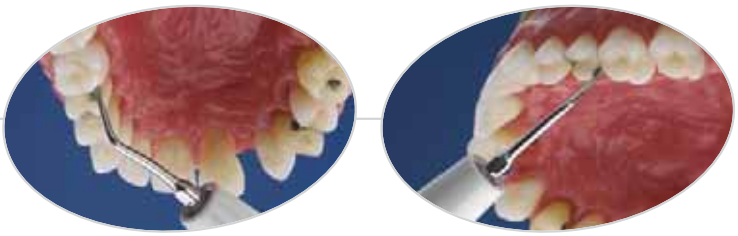
EX1 tip: ball diamond tip (46µm). Diameter 1.7mm. Preparation of the **occlusal surface and cervical margins**.



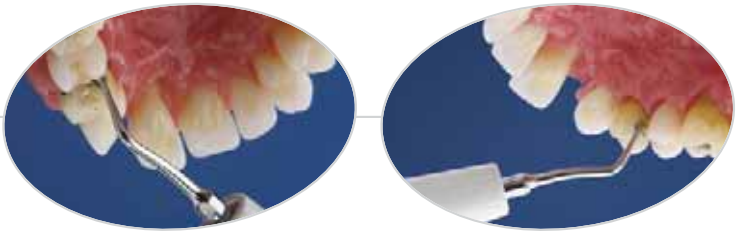
EX2 tip: half ball diamond tip (46µm). Diameter 1.7mm. Preparation of the **proximal surface without damaging the adjacent tooth**.



EX3 tip: half ball diamond tip (46µm). Diameter 1.7mm. Preparation of the **distal surface without damaging the adjacent tooth**.

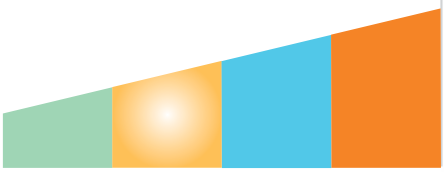


EXL tip: half ball diamond tip (46µm). Set **45° to the left**. Allows **access to the lesion without damaging the adjacent tooth**.



EXR tip: half ball diamond tip (46µm). Set **45° to the right**. Allows **access to the lesion without damaging the adjacent tooth**.

Color Coding System - Newtron Technology
Identification of power modes by color coding.



PERFECT MARGIN ROUNDED

Prosthetic finishing

This instrument kit, developed with the scientific collaboration of:

- Dr Marc Sous - former University Lecturer, Victor Segalen University, Bordeaux (France);
- Dr Jean-François Lasserre - Assistant Professor, Victor Segalen University, Bordeaux (France);
- Mr Yann Le Peticorps - Professor, University Bordeaux 1 - ICMCB/CNRS (France),

is intended for tissue preparation and prosthetic finishing.

The surfaces of the **Perfect'Margin** tips have been specially designed for each sequence of the procedure, so that the dentinal tissue can be quickly and safely prepared in areas where it would be delicate to use a diamond bur. Their fine, profiled shape enables delicate penetration of the sulcus to finish the sub-gingival limits without harming the free gum margin and the biological width.

The results obtained enable a better quality of impression-taking and an extremely precise cervical adjustment of the prosthetic restoration.

Despite the high power (blue code) of the **Satelec** piezoelectric generators, the **Newtron** handpiece retains a tactile sensation that is impossible to achieve with a bur.

The instrument features a rounded end.

Ref. F02250 **PM1**

Ref. F02251 **PM2**

Ref. F02252 **PM3**

Ref. F02253 **PM4**

POWER SETTINGS

	P-Max Newtron XS		P5 Newtron (LED) P5 Newtron XS (LED)		P-Max Newtron (Lux) Prophy Max Newtron (Lux)		SP Newtron (LED/Lux)		Suprasson P5 Booster	
PM1 tip	15 to 16		15 to 16		5 to 10		7 to 8		9 to 10	
PM2 tip	15 to 16	6 to 8	15 to 16	6 to 8	5 to 10	1	7 to 8	4 to 5	9 to 10	5 to 6
PM3 tip	10 to 11		10 to 11		8 to 10		5		9 to 10	
PM4 tip	14 to 15		14 to 15		7 to 9		7 to 8		7 to 9	

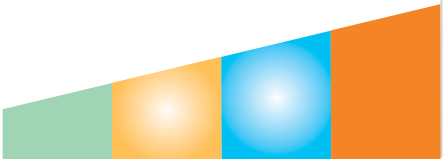

PM1 tip: "Preparation"
Quarter round shape - Instrument with rounded end, 76µm diamond-coating.
First instrument in the ultrasonic sequence, after the rotary phase. Laser marking at 1mm from the end.
Penetration of the sulcus to continue preparation of the dentin, and thus to prepare the finish line.


PM2 tip: "Finishing"
Quarter round shape - Instrument with rounded end, 46µm diamond-coating.
Second instrument in the ultrasonic sequence. Laser marking at 1mm from the end. The diamond coating is less dense than the PM 1, enabling a sharp-edged finish.
On the lowest ultrasonic power setting, it is used for polishing dentine.


PM3 tip: "Polishing"
Quarter round shape.
This totally smooth instrument completes the finishing sequence by improving the surface condition of the cervical limit prior to impression taking. Laser marking at 1mm from the end.


PM4 tip: "Corono-radicular preparation"
Conical shape.
The conical taper and 46µm diamond coating are ideally suited to corono-radicular preparation before inlay fitting, as well as for smoothing the entry cones of anatomical posts.

Color Coding System - Newtron Technology
Identification of power modes by color coding.



PERFECT MARGIN
SHOULDER

Prosthetic finishing

This new instrumentation, thanks to the low amplitude of the ultrasonic vibration, causes no bleeding and respects both the marginal gingiva and the biological width during pre-prosthetics finishing.

The laser marking 1 mm from the working end of **PMS1**, **PMS2** and **PMS3** tips helps to visualise and control the sulcular penetration and protect the attachment.

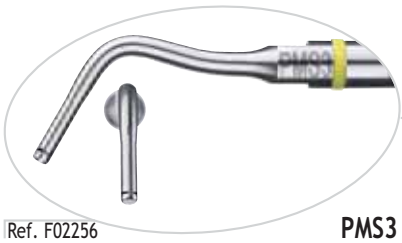
The safety and precision of the procedure are guaranteed.

The shoulder shape of the instruments enables not only a better preparation of the cervical margin “lip”, but also a finer finish inside the sulcus.

The end of the tips has a rounded internal angle.

Ref. F02254 **PMS1**

Ref. F02255 **PMS2**

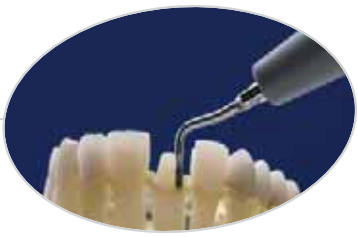


Ref. F02256 **PMS3**

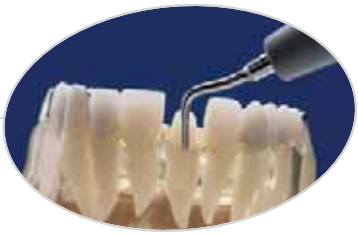
Ref. F02253 **PM4**

POWER SETTINGS

	P-Max Newtron XS		P5 Newtron (LED) P5 Newtron XS (LED)		P-Max Newtron (Lux) Prophy Max Newtron (Lux)		SP Newtron (LED/Lux)		Suprasson P5 Booster	
PMS1 tip	15 to 16		15 to 16		5 to 10		7 to 8		9 to 10	
PMS2 tip	15 to 16	6 to 8	15 to 16	6 to 8	5 to 10	1	7 to 8	4 to 5	9 to 10	5 to 6
PMS3 tip	10 to 11		10 to 11		8 to 10		5		9 to 10	
PM4 tip	14 to 15		14 to 15		7 to 9		7 to 8		7 to 9	





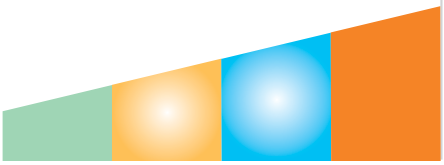
PMS 1 tip: "Preparation"
Shoulder shape with rounded internal angle - 76µm diamond-coating.
First instrument in the ultrasonic sequence, after the rotary phase. Laser marking at 1mm from the end. Penetration of the sulcus to continue preparation of the dentin, correct the "lip" and thus to prepare the finish line in a shoulder shape.

PMS2 tip: "Finishing"
Shoulder shape with rounded internal angle - 46µm diamond-coating.
Second instrument in the ultrasonic sequence. With its diamond coating that is less dense than on the **PMS1** and its laser marking at 1mm from the end, this instrument makes it possible to achieve a shoulder shape finish without harming the attachment system. On the lowest ultrasonic power setting, it is used for polishing dentine.

PMS3 tip: "Polishing"
Shoulder shape with rounded internal angle.
This totally smooth instrument completes the finishing sequence by improving the surface condition of the cervical limit prior to impression taking. Laser marking at 1mm from the end.

PM4 tip: "Corono-radicular preparation"
Conical shape.
The conical taper and 46µm diamond coating are ideally suited to corono-radicular preparation before inlay fitting, as well as for smoothing the entry cones of anatomical posts.

Color Coding System - Newtron Technology
Identification of power modes by color coding.



Ultrasonic condensation and polymerization tips

We recommend storing these tips in the clinical kit and identifying them with the orange code for very high power use.

The **GI-1** tip is placed lightly on the glass ionomer and activated for 15 to 30 seconds for all materials and restorations. The ionomer is hardened when the vibration turns into a resonating sound. This tip, used at very high power, generates the transformation into heat of the ultrasonic energy. As such, care must be taken to avoid contact between soft tissues and the shaft or any other metal surface of the tip. (28)

The **Piezocem** tip is delivered with spare sterilizable thermo-plastic heads. They must be replaced as soon as cracks appear, to avoid damaging the prosthesis.

Ref. F02151 **GI-1**

Ref. F00113 **C20**

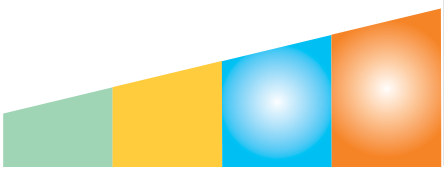
POWER SETTINGS

	P-Max Newtron XS	P5 Newtron (LED) P5 Newtron XS (LED	P-Max Newtron (Lux) Prophy Max Newtron (Lux)	SP Newtron (LED/Lux)	Suprasson P5 Booster
GI-1 tip	18 to 20	18 to 20	9 to 10	9 to 10	10 to 12
C20 tip	11 to 12	11 to 12	2 to 3	7 to 8	7 to 8

GI-1 tip: "Glass ionomer".
The end of the tip and most of the working length may be put in contact with the **glass ionomer**. The tip must not be moved once activated. The emission of a characteristic sound by the tip is a sign that the material has hardened. Wet the tip with bonding agent or varnish to prevent unhardened material from adhering to it.

C20 tip: "Piezocem, contra-angle".
Condensation tip for inlays and onlays. Used for **posterior teeth. The tips are activated in 10-second sequences until the prosthesis is perfectly fitted in the cavity**. In general, two to three sequences are required. Excess cement should be removed from the margins after each sequence.

Color Coding System - Newtron Technology
Identification of power modes by color coding.



Loosening tips

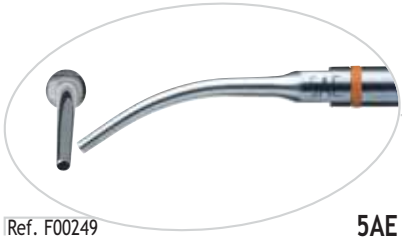
These two tips suit all loosening applications. The cylindrical, slight elbow shape was designed to transmit vibrations as efficiently as possible while, at the same time, offering a clear view of the operating field. This is why loosening tips are more effective in these situations than any other type of tip.

The tips are applied against the lingual and buccal surfaces first, ending with the occlusal surface. The flat end of the tip is held firmly against the tooth.

The **5AE** tip, in combination with endodontic retreatment tips, is also recommended for loosening root canal posts.

The **ETPR** is designed specially for post removal (see p. 38).

It may be necessary to use the generator at maximum power for limited periods. In such cases, care must be taken to prevent overheating and damage to underlying and surrounding tissues.



Ref. F00249 **5AE**

Ref. F88019 **ETPR**

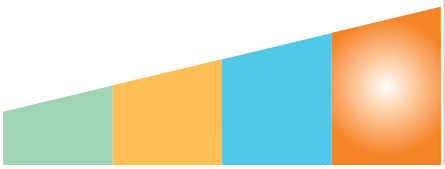
POWER SETTINGS

	P-Max Newtron XS	P5 Newtron (LED) P5 Newtron XS (LED	P-Max Newtron (Lux) Prophy Max Newtron (Lux)	SP Newtron (LED/Lux)	Suprasson P5 Booster
No. 5AE tip	20	20	10	10	11 to 14
ETPR tip	20	20	10	10	14

No. 5AE tip: "Loosening with spray".
This tip has a **spray orifice that makes it possible to cool the operating field** and prevent heat from being transmitted to the prosthesis and the underlying tooth.

ETPR tip: "Endo Treatment, Post Removal".
Tip for **loosening root canal retention pins**. It is used to extract prosthetics with the integrated irrigation, at maximum power and in contact with the element that is being loosened.

Color Coding System - Newtron Technology
Identification of power modes by color coding.



Power settings

Table-top devices

	NEWTRON TECHNOLOGY			SUPRASSON TECHNOLOGY	
Tips	P-Max Newtron XS	P5 Newtron (LED) P5 Newtron XS (LED)	P-Max Newtron (Lux) Prophy Max Newtron (Lux)	Suprasson P5 Booster	Suprasson P-Max (Lux) Prophy Max (S/Lux)
No. 1	14 to 15	14 to 15	8 to 10	7 to 9	5 to 9
No. 1-S	14 to 15	14 to 15	8 to 10	7 to 10	5 to 10
No. 2	14 to 15	14 to 15	8 to 10	7 to 10	5 to 10
No. 3	14 to 15	14 to 15	8 to 10	7 to 8	5 to 8
No. 5AE	20	20	10	11 to 14	10
No. 10P	14 to 15	14 to 15	8 to 10	7 to 8	5 to 8
No. 10X	12 to 14	12 to 14	6 to 8	7 to 8	1 to 5
No. 10Z	12 to 14	12 to 14	6 to 8	7 to 8	1 to 4
AS3D	3 to 5	3 to 5	5 to 9	2 to 3	2 to 3
AS6D	3 to 5	3 to 5	5 to 9	2 to 3	2 to 3
AS9D	5 to 7	5 to 7	5 to 7	4 to 5	4 to 6
ASLD	6 to 9	6 to 9	5 to 9	6 to 9	5 to 10
ASRD	6 to 9	6 to 9	5 to 9	6 to 9	5 to 10
C20	11 to 12	11 to 12	2 to 3	7 to 8	7 to 8
ET18D	6 to 10	6 to 10	5 to 10	6 to 10	8 to 10
ET20	6 to 10	6 to 10	5 to 10	6 to 10	8 to 10
ET20D	6 to 10	6 to 10	5 to 10	6 to 10	8 to 10
ET25	6 to 10	6 to 10	5 to 10	6 to 10	8 to 10
ET25S	6 to 10	6 to 10	5 to 10	6 to 10	8 to 10
ET25L	6 to 10	6 to 10	5 to 10	6 to 10	8 to 10
ET40	6 to 10	6 to 10	5 to 10	5 to 10	8 to 10
ET40D	6 to 10	6 to 10	5 to 10	5 to 10	8 to 10
ETBD	6 to 9	6 to 9	5 to 9	6 to 8	8 to 10
ETPR	20	20	10	14	10
EX1	11 to 14	11 to 14	1 to 5	6 to 8	1 to 4
EX2	11 to 14	11 to 14	1 to 5	6 to 8	1 to 4
EX3	11 to 14	11 to 14	1 to 5	6 to 8	1 to 4
EXL	11 to 14	11 to 14	1 to 5	6 to 8	1 to 4
EXR	11 to 14	11 to 14	1 to 5	6 to 8	1 to 4
GI-1	18 to 20	18 to 20	9 to 10	10 to 12	8 to 10

Power modes:

Newtron	Low	Medium	High	Very high
Suprasson	Scaling button/mode (High power)	Perio button/mode (Low power)	Endo button/mode (Medium power)	

Power settings

Table-top devices

	NEWTRON TECHNOLOGY			SUPRASSON TECHNOLOGY	
Tips	P-Max Newtron XS	P5 Newtron (LED) P5 Newtron XS (LED)	P-Max Newtron (Lux) Prophy Max Newtron (Lux)	Suprasson P5 Booster	Suprasson P-Max (Lux) Prophy Max (S/Lux)
H1	1 to 2	1 to 2	1 to 5	1 to 3	1 to 5
H2L	1 to 2	1 to 2	1 to 5	1 to 3	1 to 5
H2R	1 to 2	1 to 2	1 to 5	1 to 3	1 to 5
H3	1 to 2	1 to 2	1 to 5	1 to 4	5 to 10
H4L	1 to 2	1 to 2	1 to 5	1 to 4	5 to 10
H4R	1 to 2	1 to 2	1 to 5	1 to 4	5 to 10
IRR20-21	9 to 11	9 to 11	4 to 7	4 to 6	4 to 7
IRR20-25	9 to 11	9 to 11	4 to 7	4 to 6	4 to 7
IRR25-21	9 to 11	9 to 11	4 to 7	4 to 6	4 to 7
IRR25-25	9 to 11	9 to 11	4 to 7	4 to 6	4 to 7
FILES	6 to 7	6 to 7	4 to 7	4 to 7	4 to 7
P14D	6 to 8	6 to 8	5 to 8	5 to 8	5 to 10
P15LD	6 to 8	6 to 8	5 to 8	5 to 8	5 to 10
P15RD	6 to 8	6 to 8	5 to 8	5 to 8	5 to 10
P2L	2 to 5	2 to 5	2 to 6	2 to 4	2 to 5
P2R	2 to 5	2 to 5	2 to 6	2 to 4	2 to 5
PH1	1 to 2	1 to 2	1 to 3	1 to 3	1 to 3
PH2L	1 to 2	1 to 2	1 to 3	1 to 3	1 to 3
PH2R	1 to 2	1 to 2	1 to 3	1 to 3	1 to 3
PM1/PMS1	15 to 16	15 to 16	5 to 10	9 to 10	5 to 9
PM2/PMS2	15 to 16 / 6 to 8	15 to 16 / 6 to 8	5 to 10 / 1	9 to 10 / 5 to 6	5 to 9 / 1 to 4
PM3/PMS3	10 to 11	10 to 11	8 to 10	9 to 10	1 to 4
PM4	14 to 15	14 to 15	7 to 9	7 to 9	5 to 9
SO4	7 to 8	7 to 8	7 to 8	6 to 8	5 to 10
TK1-1S	1 to 2	1 to 2	1 to 5	1 to 3	1 to 5
TK1-1L	1 to 2	1 to 2	1 to 5	1 to 3	1 to 5
TK2-1L	1 to 2	1 to 2	1 to 4	1 to 3	1 to 5
TK21R	1 to 2	1 to 2	1 to 4	1 to 3	1 to 5

Power settings scale:

- **P-Max Newtron / Prophy Max Newtron:** from 1 to 10 in each clinical range.
- **P5 Newtron / P5 Newtron XS / P-Max Newtron XS:** from 1 to 20 depending on clinical range.
- **P5 Booster :** from 1 to 14 depending on clinical range.

Former generation tips:

Send your enquiry to www.acteongroup.com or satelec@acteongroup.com.

Power settings

Modules /Chairs

	NEWTRON TECHNOLOGY	SUPRASSON TECHNOLOGY	
Tips	SP Newtron (LED/Lux)	SP 3055 / B	SP 4055 (Lux)
No. 1	7 to 8	5 to 9	5 to 9
No. 1-S	7 to 8	5 to 10	5 to 10
No. 2	7 to 8	5 to 10	5 to 10
No. 3	7 to 8	5 to 8	5 to 8
No. 5AE	10	10	10
No. 10P	7 to 8	5 to 8	5 to 8
No. 10X	6 to 7	1 to 4	1 to 5
No. 10Z	6 to 7	7 to 8	1 to 4
AS3D	1 to 3	1 to 2**	1 to 3
AS6D	1 to 3	1 to 2**	1 to 3
AS9D	2 to 4	1 to 4**	1 to 4
ASLD	3 to 5	5 to 8**	5 to 10
ASRD	3 to 5	5 à 8**	5 to 10
C20	7 to 8	5 to 6	5 à 6
ET18D	3 to 5	8 to 10**	8 to 10*
ET20	3 to 5	8 to 10**	8 to 10*
ET20D	3 to 5	8 to 10**	8 to 10*
ET25	3 to 5	8 to 10**	8 to 10*
ET25S	3 to 5	8 to 10**	8 to 10*
ET25L	3 to 5	8 to 10**	8 to 10*
ET40	3 to 5	8 to 10**	8 to 10*
ET40D	3 to 5	8 to 10**	8 to 10*
ETBD	3 to 4	6 to 8**	7 to 9*
ETPR	10	10	10
EX1	6 to 7	1 to 4	1 to 4
EX2	6 to 7	1 to 4	1 to 4
EX3	6 to 7	1 to 4	1 to 4
EXL	6 to 7	1 to 4	1 to 4
EXR	6 to 7	1 to 4	1 to 4
GI-1	9 to 10	9 to 10	8 to 10

Power modes:

Newtron	Low	Medium	High	Very high
Suprasson	Scaling button/mode (High power)	Perio button/mode (Low power)	Endo button/mode (Medium power)	

Power settings

Modules /Chairs

	NEWTRON TECHNOLOGY		SUPRASSON TECHNOLOGY	
Tips	SP Newtron (LED/Lux)		SP 3055 / B	SP 4055 (Lux)
H1	1 to 2		1 to 3**	1 to 5*
H2L	1 to 2		1 to 3**	1 to 5*
H2R	1 to 2		1 to 3**	1 to 5*
H3	1 to 2		1 to 3**	1 to 5*
H4L	1 to 2		1 to 3**	1 to 5*
H4R	1 to 2		1 to 3**	1 to 5*
IRR20-21	3 to 4		1 to 4**	1 to 4*
IRR20-25	3 to 4		1 to 4**	1 to 4*
IRR25-21	3 to 4		1 to 4**	1 to 4*
IRR25-25	3 to 4		1 to 4**	1 to 4*
FILES	3 to 4		1 to 4**	1 to 4*
P14D	3 to 5		5 to 8**	5 to 10*
P15LD	3 to 5		5 to 8**	5 to 10*
P15RD	3 to 5		5 to 8**	5 to 10*
P2L	2 to 5		2 to 4**	2 to 5*
P2R	2 to 5		2 to 4**	2 to 5*
PH1	1 to 2		1 to 2**	1 to 3*
PH2L	1 to 2		1 to 2**	1 to 3*
PH2R	1 to 2		1 to 2**	1 to 3*
PM1/PMS1	7 to 8		5 to 9	5 to 9
PM2/PMS2	7 to 8	4 to 5	5 to 9	5 to 9
PM3/PMS3	5		5 to 9	5 to 9
PM4	7 to 8		5 to 9	5 to 9
SO4	4 to 5		8 to 10**	5 to 10*
TK1-1S	1 to 2		1 to 3**	1 to 5*
TK1-1L	1 to 2		1 to 3**	1 to 5*
TK2-1L	1 to 2		1 to 3**	1 to 5*
TK21R	1 to 2		1 to 3**	1 to 5*

** Three position button (S/E/P) option for the SP 4055 (Lux) modules.*

*** Two position button (S/E) option for the SP 3055 (B) modules.*

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Notes

Notes

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