ACTEON® Veterinary

SOLUTIONS FOR MORE TAILORED TREATMENTS

Veterinary Guide

acteon
veterinary

ABOUT ACTEON®

ACTEON® creates and develops high-tech medical devices and consumables that enable dentists, surgeons and veterinarians to implement less invasive, less traumatic and quicker operating protocols.

ACTEON® endeavored to play a key role in forming a link between human medicine and veterinary medicine, in particular in dentistry, offering innovative solutions and running practical training sessions around the world.

ACTEON® is a global pioneer in:
• Digital medical imagery, which provides a digital image of surgical sites during dental microsurgery
• Powerful ultrasounds specially developed for high-precision treatments
• Medical technologies in piezoelectric surgery

Although its head office is in France, a network of 26 offices provides our users with a more local service.

CONTENTS

ACTEON®
IMAGING

FACTS & FIGURES

Radiographs of teeth can detect lesions that are not clinically visible in 42% of cats and in 28% of dogs (Verstraete, 1998) *(Fig. 1 & 2)*.

Fig. 1: Periodontitis located on the first mandibular molar of a cat

Fig. 2: X-ray produced with the SOPIX[2] sensor, showing the extent of damage to the alveolar bone

When a cat has a missing tooth, in 75% of cases, the X-ray image shows retained root fragments (Lommer et al. JVMA 2001).

Out of 74 dogs and 42 cats which had carnassial teeth extracted by general practitioners, 82% and 93% respectively were found to have radicular fragments, and periapical pathologies were detected in 56.8% of all patients, compared with none in animals on which pre- and post-operative dental X-rays were taken (Moore et al. JAAHA, 2014).

PRINCIPLE OF RADIATION PROTECTION

Like all professionals using electric generators that produce ionising radiation, veterinarians are bound by obligations intended to guarantee protection of the public and their staff.

Ionising radiation can seriously impact the health of individuals exposed to it. Practitioners must have full knowledge of the documentation governing this radiation protection as they may be held liable. They must implement a certain number of measures relating to the radiology equipment and the arrangement of the premises. Veterinarians must request permission to have X-ray equipment, and ensure compliance with the conformity standards pertaining to this equipment and to X-ray facilities. They must carry out checks of the radiation sources, the environment and the premises, to determine the risks and mitigate these.

The organization of the protection of staff in a veterinary clinic against radiation relies, pursuant to the regulations, on the designation of a radiation protection supervisor. The training of the designated supervisor is regulated. They must ensure compliance with protection measures, organize the monitoring of personnel and implement the means required to protect staff and the public from radiation.

CLINICAL APPLICATION

Veterinarians now also benefit from the spiral CT (spiral scanner) with multiple detectors and cone beam computed tomography (CBCT), which they can use these to assess oral-dental pathologies in dogs, cats, rabbits and rodents. However, intraoral X-ray remains the most commonly used diagnostic imaging system for dental examinations at veterinary practices. This turnkey diagnostic system is easy to use and provides essential information to assess:

• Radicular resorption in cats and dogs
• Caries in dogs
• The presence of radicular debris and impacted teeth
• A periapical pathology on a tooth requires root canal treatment (*Fig. 3 & 4*)
• The scale and type of dental bone resorption requires periodontal treatment
• The different stages of root canal treatment and filling
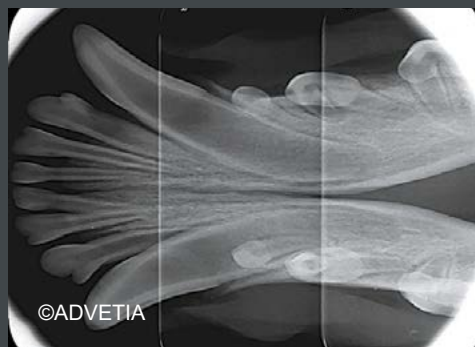• Etc.

Fig. 3: Apical abscess on a dog's premolar

©ADVETIA
Fig. 4: Size 4 X-ray with PSPIX²

APPLICATION & RECOMMENDATIONS FOR USE

The digital sensor or the phosphor plate is used in intraoral treatment in the same way as a dental film. With the rigid digital sensor being thicker, it may be more uncomfortable for patients than the phosphor plate. In addition, there are more sizes of plates than sensors (only 2 sizes). They enable an X-ray image to be taken of any tooth, as well as the adjacent bone structures. They can also be used to assess the jaws or naval cavities of small patients. In addition, they can also be used to take X-ray images of other structures (*Fig. 5*) such as the extremities of the limbs of cats, miniature/small dogs, rabbits and rodents, or the beaks of birds (*Fig. 6*).
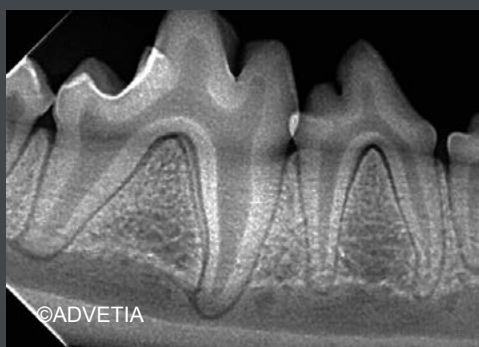

©ADVETIA

Fig. 5: Mandibular fourth premolar and first molar of a dog

©ADVETIA

Fig. 6: Tarsus of a ferret taken using a SOPIX²® digital sensor

Due to the Sopro® Imaging Veterinary software, the X-ray image obtained after a few seconds is either directly displayed on the computer screen if you have used the digital sensor, or on the PSPIX®² if you have used the phosphor plate.

RECOMMENDATIONS FOR USE

Dental X-rays rely on the use of an X-Mind® dental X-ray generator combined with a SOPIX® digital sensor and SOPIX®² (*Fig. 7*), PSPIX®² RLMS, or dental X-ray films (photographic).

©ADVETIA

Fig. 7: Direct display of the image on the screen with the SOPIX² sensor

POSITIONING TECHNIQUES

Parallel technique

For mandibular premolars and molars, the RLMS or the sensor can be placed against the structure to be X-rayed (*Fig. 8*), parallel to its main axis.
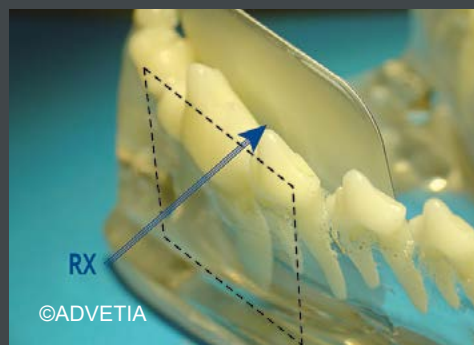

RX

©ADVETIA

Fig. 8: Parallel radiography technique

The animal is placed in the lateral decubitus position, laid on the side opposite the structure to be X-rayed (*Fig. 9 & 10*).

©ADVETIA

Fig. 9: SOPIX®² in intraoral position, parallel to the mandible

©ADVETIA

Fig. 10: Positioning of the SOPIX®² sensor, with its protection sleeve, in the mouth of a cat

©ADVETIA

Clinic - cat - perio - X-ray aspect

Bisecting angle technique

For the other teeth, the RLMS or the sensor must be placed at a given angle against the structure to be X-rayed. The incident radius must be perpendicular to the bisecting angle of the angle formed by the plane of the film and that of the root axis line of the tooth.
This technique is used in the different sectors of the oral cavity.
- For a tooth isolated with a retro alveolar film *(Fig. 11, 12, 13 & 14)*
- Canines, incisors with an intraoral film in occlusal position *(Fig. 15)*
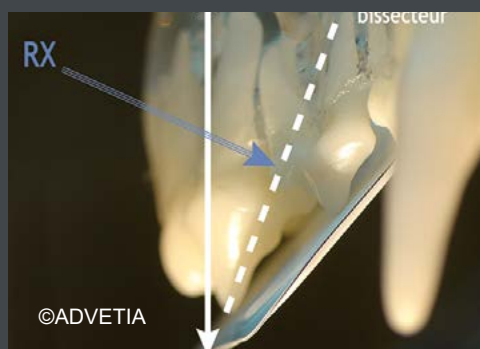- Mandibular or maxillary dental arch with an extraoral film

Fig. 11: Principle of the bisecting angle technique - retroalveolar film

Fig. 12: Bisecting angle technique with a size 2 SOPIX® in occlusal position

Fig. 13: PSPIX®² plate placed in the mouth using the bisecting angle technique

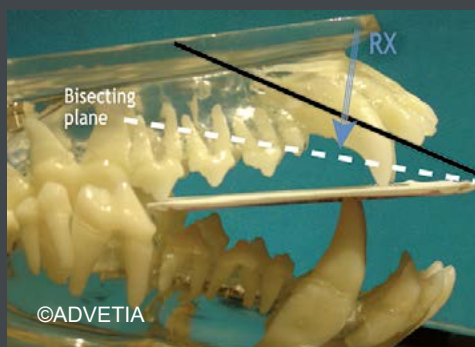Fig. 14: K-file with working length, illustrated using the bisecting angle technique

Fig. 15: Principle of the bisecting angle technique - film in occlusal position

x-mind dc

The ingenious and simple intraoral system to meet your highest standards

RELIABLE

X-Mind® DC generators are recognized for their reliable and consistent performance. Two lead beam-limitation devices and the expansion chamber guarantee optimal protection of the practitioner and practice staff.

NATURAL PROTECTION

The control of exposure times preset by microprocessor guarantees a continuous dose to the patient.
Exposure times are reduced with the use of digital intraoral X-ray systems.

USER-FRIENDLY

Ergonomically arranged and programmed buttons: ensures faster task management. Exposure times can be customized to suit your clinical needs.

Delivered with 70kV generator, pantograph, extension arm, timer.

X-MIND® DC VET - WALL-MOUNTED - FIXED AT THE TOP

ARM LENGTH 0.40m	(max. distance 143cm)	Long Cone	*5.92.23187*
ARM LENGTH 0.80m	(max. distance 184cm)	Long Cone	*5.92.23184*
ARM LENGTH 1.10m	(max. distance 212cm)	Long Cone	*5.92.23186*

X-MIND® DC VET - WALL-MOUNTED - FIXED BY THE BOTTOM

ARM LENGTH 0.40m	(max. distance 143cm)	Long Cone	*5.92.23180*
ARM LENGTH 0.80m	(max. distance 184cm)	Long Cone	*5.92.23181*
ARM LENGTH 1.10m	(max. distance 212cm)	Long Cone	*5.92.23182*

X-MIND® DC VET - CEILING-MOUNTED

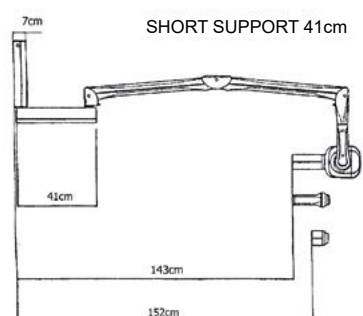|		
Ceiling-mounted with 0.40m arm (on standard Ø60cm Faro column) Ceiling attachments not included	Long Cone	*5.92.23185*

X-MIND® DC VET MOBILE

|		
MOBILE SUPPORT	Long Cone	*5.92.23183*

X-MIND® DC TECHNICAL CHARACTERISTICS

Classification	Electromedical equipment, class 1 type B
Supply voltage	115/230V - 50/60Hz
Power absorbed at	1.4kVA
High voltage	60 to 70kV
Anodic current	4 to 8mA
Focal spot	0.7mm
Total filtration	Equivalent to 2mm Al at 70kV
Leakage radiation	< 0.25mGy/hr
Technology	Direct current - HF 150KHz generator
Timer	from 0.02 to 3.2 seconds
Weight of head	5.5kg
Total weight	25kg

SHORT SUPPORT 41cm

EXTENSION 0.41m

STANDARD SUPPORT 82.5cm
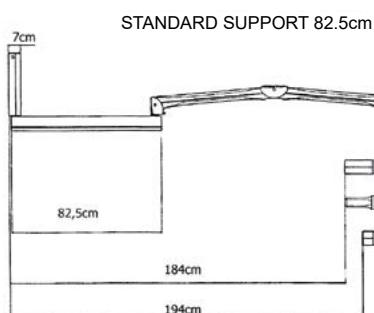
EXTENSION 0.825m

LONG SUPPORT 110cm
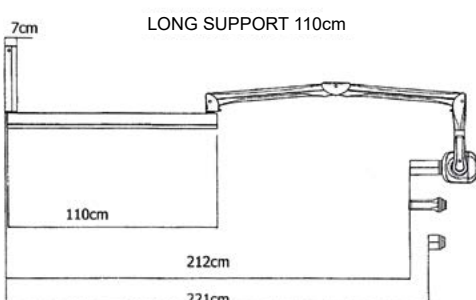
EXTENSION 1.10m

X-MIND® DC ACCESSORIES

	X-MIND® DC HEAD	*5.31.23130*
	X-MIND® DC 230V TIMER	*5.35.23180*
	SHORT CONE (20cm DFP) Recommended for the bisecting angle technique	*29701195*
	LONG CONE (31cm DFP) Recommended for the parallel technique	*29701197*
	SQUARE CONE (31cm DFP) Reduces the radiation applied to the patient's skin	*29701199.C*
	X-MIND® DC WALL-MOUNTED SUPPORT Fixed at the bottom	*29700384.C*
	X-MIND® DC WALL-MOUNTED SUPPORT Fixed at the top	*29700385.C*
	IRIX 79 WALL ADAPTER PLATE For installation of X-Mind® DC	*22002350*
	X-MIND® DC PANTOGRAPH	*29701006.C*
	X-MIND® DC 0.40m EXTENSION Fixed at the bottom	*29700380.C*
	X-MIND® DC 0.80m EXTENSION Fixed at the bottom	*29700378.C*
	X-MIND® DC 1.10m EXTENSION Fixed at the bottom	*29700379.C*
	X-MIND® DC 0.80m EXTENSION With pantograph and wall support	*5.30.00131*
	X-MIND® DC 1.10m EXTENSION With pantograph and wall support	*5.30.00132*
	X-MIND® DC 0.40m EXTENSION Fixed at the top	*29700620.C*
	X-MIND® DC 0.80m EXTENSION Fixed at the top	*29700621.C*
	X-MIND® DC 1.10m EXTENSION Fixed at the top	*29700622.C*
	X-MIND® DC 0.40m EXTENSION Ceiling-mounted	*29700382.C*

x-mind unity

Versatility for more options

UNITY IS STRENGTH

X-mind® unity is ACTEON's **intraoral DC X-ray generator**, which marries an elegant design with technological solutions resulting from extensive know-how in the imaging sector.

The high-frequency (DC) generator with constant potential, combined with a small focal spot (0.4mm) and a comprehensive range of X-ray settings, is designed to offer the highest standards of image quality and safety with a simple and intuitive use that is perfectly integrated into the user's workflow.

TRUE LOW DOSE
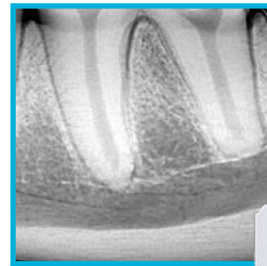
PLUG IT IN TO DISCOVER ITS FULL POTENTIAL

The combination of the **X-mind® unity** intraoral X-ray generator with the brand new **SOPIX® Plug-in**, will enable you to obtain maximum performance due to:

- **automatic control exposure (ACE) technology**, specially developed to prevent X-ray emissions when the correct radiation dose is reached on the receptor, thus ensuring that the best image quality is always obtained at the lowest compatible dose.

- **a brand new plug&play sensor connection system** providing everything you need when you need it in an elegant, safe and multipurpose solution .

- **exclusive traceability: combined with the Sopro® Imaging Veterinary software**, the X-Mind® unity settings as well as the effective dose received by the animal for each acquisition are recorded and saved in the software.
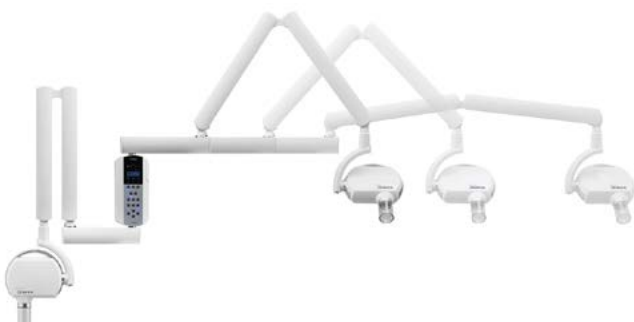
A MULTIPURPOSE GENERATOR

Three available extension arms (40, 80, 110cm), two configurations (upper arm or lower arm), one goal: **to meet your needs**.

If the wall-mounted version is not suitable for you, **X-mind® unity** is also available as a **mobile stand-alone unit**.

X-MIND® UNITY VET MOBILE

Package including mobile support and X-Mind® unity for mobile support (option)

MOBILE SUPPORT		*W0800127*
X-MIND® UNITY	Short cone	*W0800083*
X-MIND® UNITY	Long cone	*W0800130*
X-MIND® UNITY	Long square cone	*W0800131*
X-MIND® UNITY	Short square cone	*W0800132*

X-MIND® UNITY VET - WALL-MOUNTED - FIXED AT THE TOP

ARM LENGTH 0.40m	Long cone	*W0800067*
ARM LENGTH 0.80m	Long cone	*W0800068*
ARM LENGTH 1.10m	Long cone	*W0800069*
ARM LENGTH 0.40m	Short cone	*W0800073*
ARM LENGTH 0.80m	Short cone	*W0800074*
ARM LENGTH 1.10m	Short cone	*W0800075*

X-MIND® UNITY VET - WALL-MOUNTED - FIXED AT THE BOTTOM

ARM LENGTH 0.40m	Long cone	*W0800070*
ARM LENGTH 0.80m	Long cone	*W0800071*
ARM LENGTH 1.10m	Long cone	*W0800072*
ARM LENGTH 0.40m	Short cone	*W0800076*
ARM LENGTH 0.80m	Short cone	*W0800077*
ARM LENGTH 1.10m	Short cone	*W0800078*

The focal spot
of the generator (Y):
0.7mm

The focal spot
of the X-Mind® unity generator:
0.4mm

X-MIND® UNITY ACCESSORIES

ARM LENGTH 0.40m	X-Mind® unity fixed at the top	*W0800025*
ARM LENGTH 0.80m	X-Mind® unity fixed at the top	*W0800026*
ARM LENGTH 1.10m	X-Mind® unity fixed at the top	*W0800027*
ARM LENGTH 0.40m	X-Mind® unity fixed at the bottom	*W0800028*
ARM LENGTH 0.80m	X-Mind® unity fixed at the bottom	*W0800029*
ARM LENGTH 1.10m	X-Mind® unity fixed at the bottom	*W0800030*
PANTOGRAPH ARM	X-Mind® unity	*W0800031*

X-MIND® UNITY SHORT CONE Recommended for the bisecting angle technique		*W0800018*
X-MIND® UNITY LONG CONE Recommended for the parallel technique		*W0800019*
X-MIND® UNITY SHORT SQUARE CONE Reduces the radiation applied to the patient's skin		*W0800137*
X-MIND® UNITY LONG SQUARE CONE Reduces the radiation applied to the patient's skin		*W0800020*
X-MIND® UNITY HEAD		*W0800022*
X-MIND® UNITY VET TIMER		*W0800024*
IRIX 70 WALL ADAPTER PLATE For installation of X-Mind® unity		*W0800100*

X-MIND® UNITY TECHNICAL CHARACTERISTICS

Classification	Electromedical equipment, class 1 type B
Supply voltage	100/240V
Power absorbed at	850kVA
Frequency	50 to 60kV
Focal spot	0.4mm
Total filtration	> 15mm AI at 70kV
Leakage radiation	< 0.25mGy/hr
Cooling cycle for 1 sec.	32 seconds
High Frequency Technology	DC
Maximum anodic current	7mA
X-ray tube voltage	60/65/70kV
Maximum exposure time	2 seconds
Compatibility	Film, phosphor plate, digital sensor
Total weight	23kg
Configuration	Top and bottom wall-mounted, mobile
Timer	Controlled by microprocessor
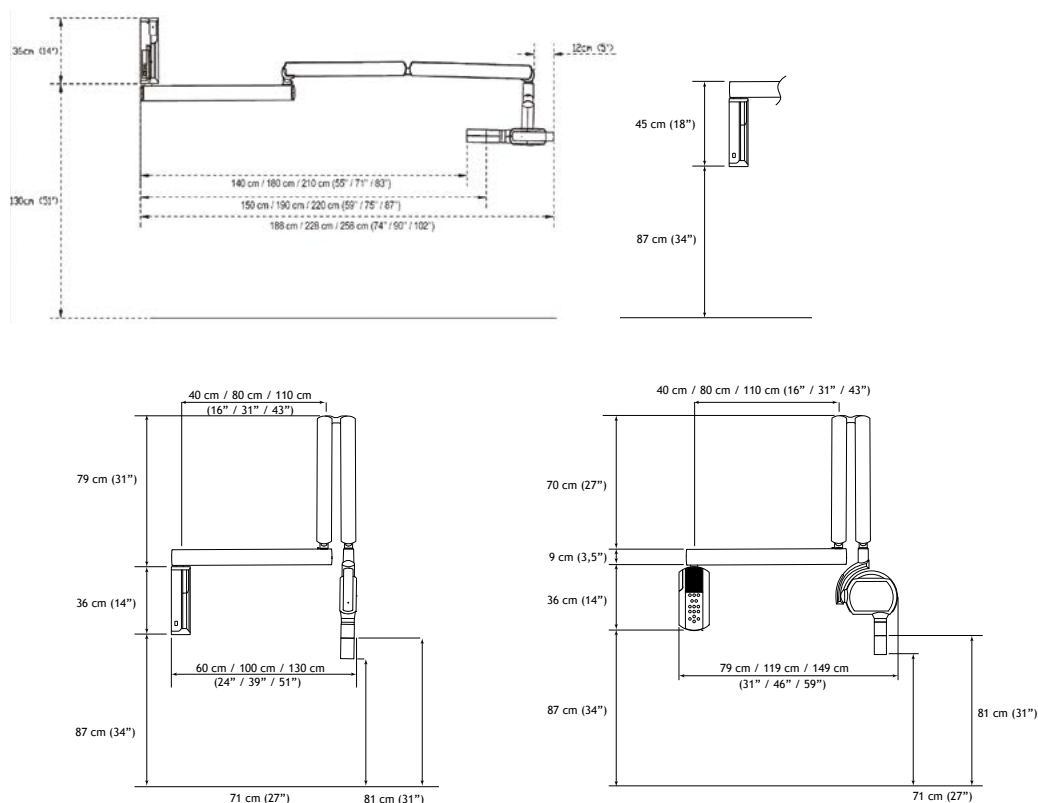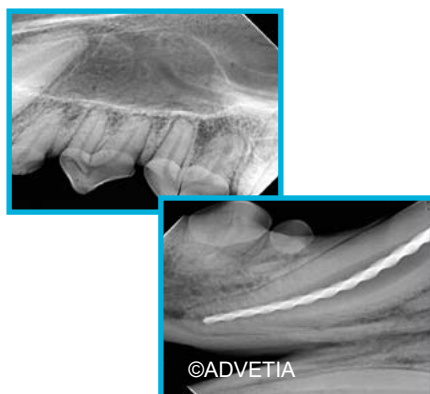
sopix series

Smart sensors for effortless performance

SMART DOSE

Our **Ace® technology** analyzes in real-time the number of X-rays accumulated by the sensor.
The image acquisition is stopped as soon as the sensor receives **the radiation dose required to produce a quality image**. Therefore, even if your generator setting is too high, the image will no longer be overexposed and you will no longer need to retake an image.

With the SOPIX® Series sensor

With competitor sensor

PERFECT IMAGE

OVEREXPOSED IMAGE

ace

X-rays

Too many X-rays

X-ray generator

End of image acquisition
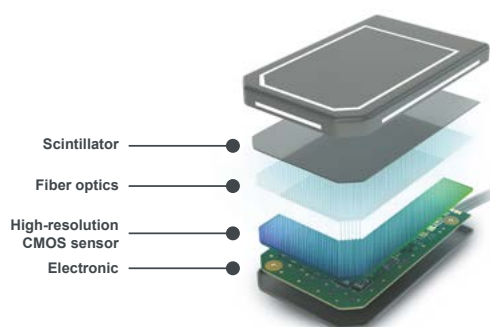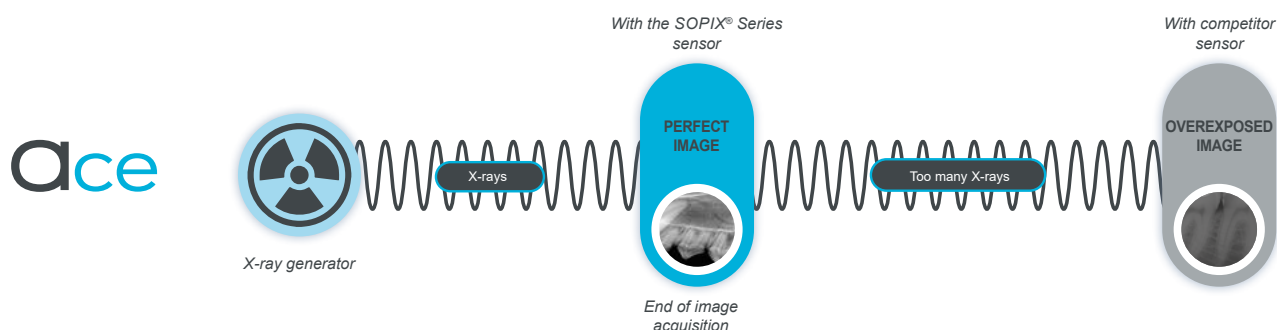
SMART TECHNOLOGY

SOPIX® SERIES **visually differentiates dental tissues** and provides a **reliable image of the tooth anatomy**, guaranteeing safe and rapid diagnosis.
FIBER2PIXEL® technology is based on the use of broad spectrum optical microfibers to guarantee image clarity and contrast.

Scintillator

Fiber optics

High-resolution CMOS sensor

Electronic

SMART FLOW

Images are **saved** in a database and can be **shared** easily, **sent** by e-mail then printed and accompanied by **comments**.

Rounded corners
for easier insertion
into the mouth

White side strips
for ease of positioning

Available in 2 sizes to ensure suitability for all clinical cases and all morphologies.

	Size 1	Size 2
Medium to large dog	✗	✓ Intra or extra-oral
Cat & very small dog	✓ Intra-oral	✓ Intra or extra-oral
Rabbit & rodents	✗	✓ Extra-oral

sopix

A reliable and affordable solution
to meet your essential needs.

Resolution: >12 pl/mm

Size 1
25x39mm

Size 2
31x42mm

sopix 2

The solution offering optimized performance
and a high-definition resolution.

Resolution: >18 pl/mm

Size 2
31x42mm

Size 1
25x39mm

SOPIX®²

Delivered with a sensor holder, 10 sensor sheaths, the Sopro® Imaging Veterinary software.

SOPIX®² SENSOR SIZE 1 USB High definition	*S_802_0010*
SOPIX®² SENSOR SIZE 2 USB High definition	*S_802_0011V*

SOPIX®

Delivered with a sensor holder, 10 sensor sheaths, the Sopro® Imaging Veterinary software.

SOPIX®² SENSOR SIZE 1 USB Standard definition	*S_802_3010V*
SOPIX® SENSOR SIZE 2 USB Standard definition	*S_802_3011V*

SOPIX®²/SOPIX® ACCESSOIRES

	POSITIONING SET FOR SOPIX®² /SOPIX® SENSORS Includes 5 positioning holders with ring (bitewing, anterior and posterior teeth, anterior and posterior endo)	*700042*
	SOPIX®² /SOPIX® SENSOR HOLDER Size 1 and 2	*926039*
	SHEATHS FOR SOPIX® /SOPIX®² Box of 500 for SOPIX®² series Size 1/2	*403026* *403027*
	USB2.0 ACTIVE BOOSTER Length: 5m	*700381*
	BITE PROTECTION	*403037*

SOPRO® IMAGING VETERINARY SOFTWARE

SOPRO® IMAGING VETERINARY   *505020*

SOPIX®²/ SOPIX® TECHNICAL CHARACTERISTICS

	Size 1 sensor	Size 2 sensor
External dimensions	25x39mm	31x42mm
Active surface	600mm² (20x30mm)	884mm² (26x34mm)
Number of pixels	1.50 million	2.21 million

	Sensor connection SOPIX®& SOPIX®²
Connection	USB 2.0
Cable length	3.70m

	SOPIX®	SOPIX®²
Technology	CMOS + scintillator + optical fiber	CMOS + scintillator + optical fiber
Pixel size	20µm x 20µm	20µm x 20µm
Nominal resolution	25 pl/mm	25 pl/mm
Resolution	>12 pl/mm	>18 pl/mm
Imaging software included	Sopro® Imaging Veterinary	Sopro® Imaging Veterinary
TWAIN Compatible	Yes	Yes

Windows®	SOPIX®	SOPIX®²
Operating System	Windows® 10 Pro	Windows® 10 Pro
Processor	Intel® Core i5	Intel® Core i7 or more
RAM	16 GB	16 GB
Hard drive	250 GB	1 TB or more
USB ports	1 USB 3.1 Gen1 Super Speed	1 USB 3.1 Gen1 Super Speed
Graphics card	1 GB RAM	Chipset Nvidia® or ATI® / Unshared memory 2 GB RAM
USB Chipset	Intel or NEC® / RENESAS®	Intel or NEC® / RENESAS®
Screen resolution	1920 x 1080	1920 x 1080

sopix plug-in

Enjoy greater flexibility with the embedded system and its portable sensor part

SMART FLOW AND TECHNOLOGY

Sopix® Plug-in benefits from the known X-ray quality characteristics **SOPIX®** with high performance and flexible sensors compatible with all clinical cases, all morphologies and all software.
It is specially designed for **use with X-Mind® unity** to ensure optimal use of all functions.

EFFECTIVE PROTECTION WITH MINIMAL EXPOSURE TIME

Due to our exclusive **Ace®** technology, our smart sensors provide even greater performance when used with X-Mind® unity.

Once the sensors receive the required dose of radiation, they order the X-Mind® unity to **limit the emission of X-rays**. The result is an optimum quality X-ray without risk of overexposure for both the image and the patient.

X-rays

1. *End of image acquisition*

PERFECT IMAGE

2. *End of X-ray emission*
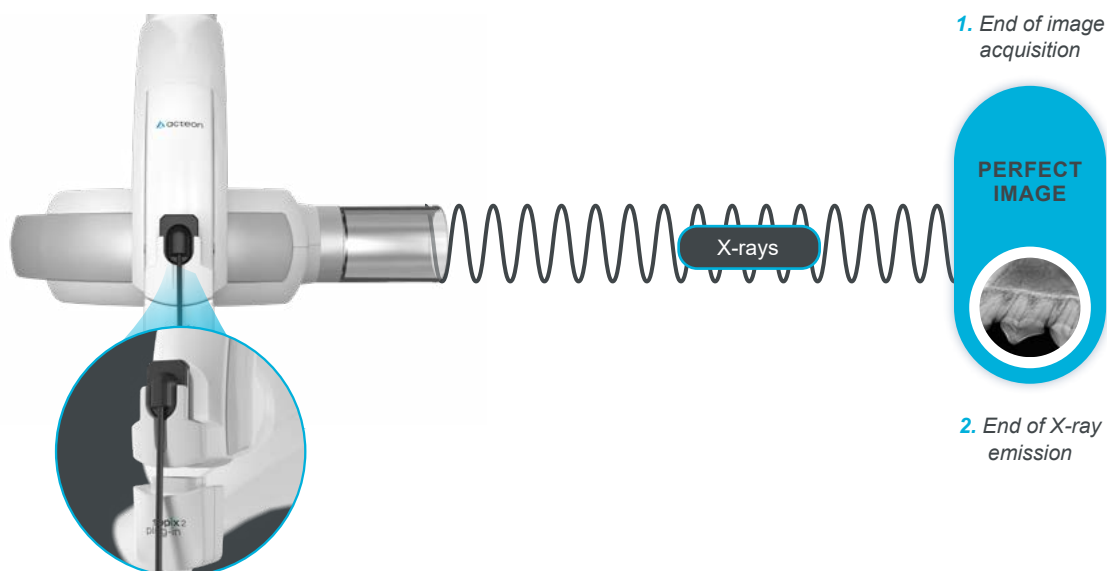
sopix
plug-in

Sopix® first generation with more safety, freedom and comfort.

Resolution: >12 pl/mm

Size 1
25x39mm

Size 2
31x42mm

Size 2
31x42mm

Size 1
25x39mm
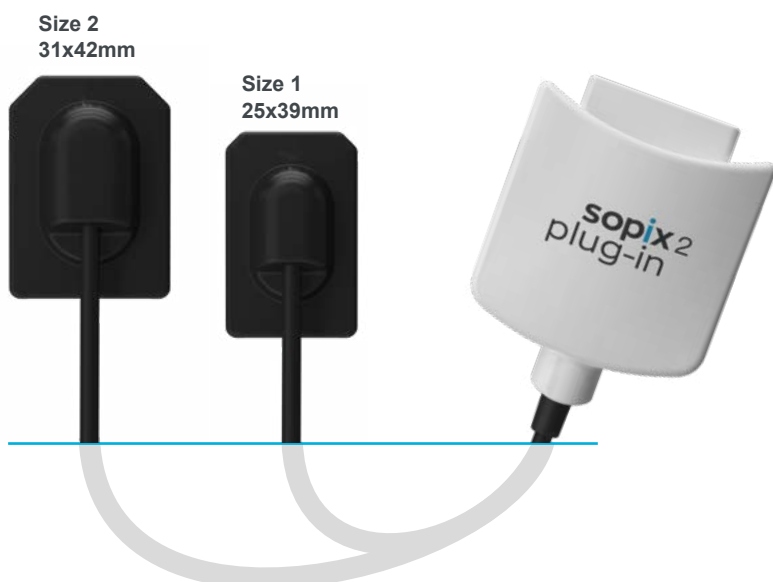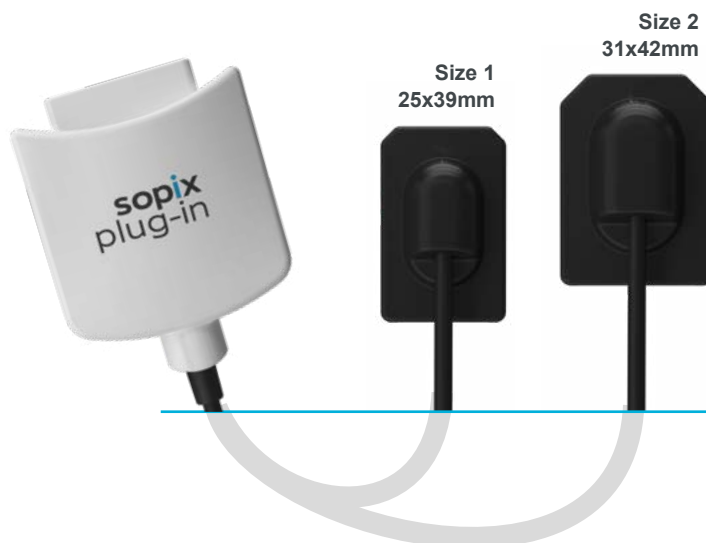
sopix 2
plug-in

The latest technology with no compromise on image quality with more safety, freedom and comfort.

Resolution: >18 pl/mm

SOPIX®² PLUG-IN

Delivered with a sensor holder, 10 sensor sheaths, the Sopro® Imaging Veterinary software.

SOPIX®² SENSOR SIZE 1 PLUG-IN High definition		*S_802_7000V*
SOPIX®² SENSOR SIZE 2 PLUG-IN High definition		*S_802_7001V*

SOPIX® PLUG-IN

Delivered with a sensor holder, 10 sensor sheaths, the Sopro® Imaging Veterinary software.

SOPIX® SENSOR SIZE 1 PLUG-IN Standard definition		*S_802_8000V*
SOPIX® SENSOR SIZE 2 PLUG-IN Standard definition		*S_802_8001V*

SOPIX®² PLUG-IN/SOPIX® PLUG-IN ACCESSORIES

SOPIX® /SOPIX®² PLUG-IN DOCK		*S_802_9000V*
POSITIONING SET FOR SOPIX®²/SOPIX® SENSORS Includes 5 positioning holders with ring (bitewing, anterior and posterior teeth, anterior and posterior endo)		*700042*

SHEATHS FOR SOPIX® /SOPIX®² Box of 500
   for SOPIX®² sensor Size 1
   for SOPIX®² sensor Size 2
		403026
		403027

BITE PROTECTION		*403037*

SOPRO® IMAGING VETERINARY SOFTWARE

SOPRO® IMAGING VETERINARY		*505020*

SOPIX® PLUG-IN/SOPIX®² PLUG-IN TECHNICAL CHARACTERISTICS

	Size 1 sensor	Size 2 sensor
External dimensions	25x39mm	31x42mm
Active surface	600mm² (20x30mm)	884mm² (26x34mm)
Number of pixels	1.50 million	2.21 million

Sensor connection SOPIX® Plug-in & SOPIX®² Plug-in	
Connection	USB 2.0
Cable length	0.70m

	SOPIX® Plug-in	SOPIX®² Plug-in
Technology	CMOS + scintillator + optical fiber	CMOS + scintillator + optical fiber
Pixel size	20µm x 20µm	20µm x 20µm
Nominal resolution	25 pl/mm	25 pl/mm
Resolution	>12 pl/mm	>18 pl/mm
Imaging software included	Sopro® Imaging Veterinary	Sopro® Imaging Veterinary
TWAIN Compatible	Yes	Yes

Windows®	SOPIX® Plug-in	SOPIX®² Plug-in
Operating System	Windows® 10 Pro	Windows® 10 Pro
Processor	Intel® Core i5	Intel® Core i7 or more
RAM	16 GB	16 GB
Hard drive	250 GB	1 TB or more
USB ports	1 USB 3.1 Gen1 Super Speed	1 USB 3.1 Gen1 Super Speed
Graphics card	1 GB RAM	Chipset Nvidia® or ATI® / Unshared memory 2 GB RAM
USB Chipset	Intel or NEC® / RENESAS®	Intel or NEC® / RENESAS®
Screen resolution	1920 x 1080	1920 x 1080

pspix2

The X-ray scanner taking care of you and your patients
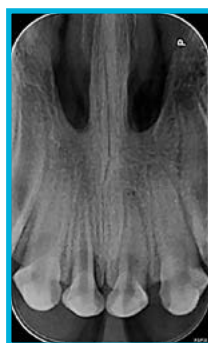
AUTOMATIC

Simply drop the plate into the slit, and the PSPIX®² will automatically detect the size, scan the plate, optimize the image, and send it instantly to your imaging software.
In the meantime, it automatically wipes and ejects the plate. The scanner is therefore immediately ready for the next scan or to switch to standby mode.
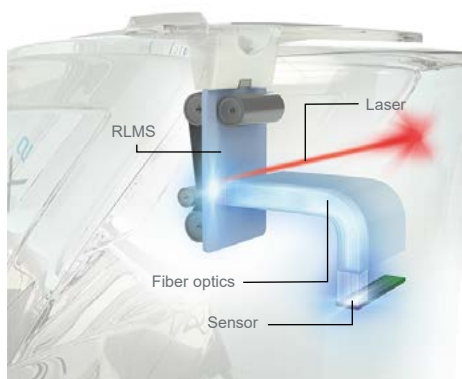
EFFECTIVE

PSPIX®² combines a number of technologies and is designed to produce, in just 12 seconds, a high-contrast image of the different dental tissues that is easy to interpret.
FIBER2PIXEL® technology is based on the use of broad spectrum optical microfibers for the guided transmission of photon emissions, in order to produce highly contrasted images.

ADAPTABLE

Created based on a cutting edge technology and design, the PSPIX®² is the smallest and most compact PSP* scanner on the market.
Its autoclavable option means that the detachable part is compatible for use in thermal washers-disinfectors, as well as conforming to the latest disinfection standards.
Its large color touch-screen provides intuitive information for fast and easy use.
It is suitable for all practices and designed for everyone.

*Programmable Scanner Position

WIDE RANGE OF REUSABLE THIN AND SOFT INTRAORAL PLATES

Size 0	Size 1	Size 2	Size 3	Size 4	
22x35mm	24x40mm	31x41mm	27x54mm	69x54mm	
✗	✗	✓ Intra-oral	✓ Intra or extra-oral	✓ Intra or extra-oral	**Medium to large dog**
✓ Intra-oral	✓ Intra-oral	✓ Intra-oral	✓ Extra-oral	✓ Extra-oral	**Cat & very small dog**
✓ Intra-oral	✗	✓ Extra-oral	✓ Extra-oral	✓ Extra-oral	**Rabbit & rodent**

FULLY AUTOMATED PROCESS

1 **Auto access:**
The door only opens when the imaging plate is inserted.

2 **Auto detect:**
PSPIX®² automatically detects the size of the inserted imaging plate.

3 **Auto scan:**
PSPIX®² scans and optimises the image before displaying it on the right workstation.

4 **Auto eject:**
The imaging plate is automatically erased and ejected for an immediate reuse.

5 **Eco Mode:**
PSPIX®² automatically switches to eco mode when it has remained unused for a while.

PSPIX®²

Comes with 1x size 4 kit (1x size 4 holder, 3x size 3 plates and 100x size 4 protective covers), 4 phosphor plates (2x size 1, 2x size 2), 200 protective covers with integrated cardboard envelope (100x size 1, 100x size 2), a plate storage box, 1 touchscreen stylus, 1 protective cover for the PSPIX®², 1 cleaning plate, 1 100-240VAC power supply, 1 Ethernet cable, the Sopro® Imaging Veterinary software and its licence.

S_702_0012

PSPIX®² ACCESSORIES

ACCESSORIES STARTER KIT 100x size 1 and 100x size 2		*700550*
PLATE STORAGE BOX delivered without imaging plates		*990219*
STYLUS FOR PSPIX®² TOUCHSCREEN		*005132*
PSPIX®² CLEANING PLATE		*990243*
PROTECTIVE COVER FOR PSPIX®²		*990247*
AUTOCLAVABLE DETACHABLE PARTS FOR PSPIX®² Contains 1 autoclavable detachable container and 1 autoclavable detachable plate insertion guide		*990241*
POSITIONING HOLDER FOR PSPIX® PLATE Includes 5 bitewing positioning holders and 1 centring ring		*S_700195*
POSITIONING HOLDER FOR PSPIX® PLATE Includes 2 anterior teeth positioning holders, 2 posterior teeth positioning holders and 2 centring rings		*S_700196*
SIZE 4 KIT FOR PSPIX®² Comes with 1x size 4 holder, 3x size 3 plates and 100x size 4 protective covers		*990252*
PLASTIC HOLDER Size 4		*990251*
PLATES Size 3 Set of 3		*990248*
PROTECTIVE COVER Size 4 Set of 100		*700644*

STANDARD PLATES

	PSPIX®2		PSPIX® 1st generation	
	Set of 2		Set of 6	
Size 0 (22x35mm)		*990215*		*S_700178*
Size 1 (24x40mm)		*990216*		*S_700179*
Size 2 (31x41mm)		*990217*		*S_700180*
Size 3 (27x54mm)		*990218*		*S_700181*

PLATE PROTECTIVE COVERS

	PROTECTIVE COVERS Standard FOR PSPIX® & PSPIX® 2 1st generation		PROTECTIVE COVERS With integrated cardboard envelope FOR PSPIX® 2		PROTECTIVE COVERS With integrated cardboard envelope FOR PSPIX® 1st generation	
	Set of 250		Set of 300		Set of 250	
Size 0		*700342L*		*700546*		*700338L*
Size 1		*700343L*		*700547*		*700339L*
Size 2		*700344L*		*700548*		*700340L*
Size 3		*700345L*		*700549*		*700341L*

PSPIX®² TECHNICAL CHARACTERISTICS

SYSTEM	
Resolution	20 lp/mm
Scanning time (fast mode)	1.6 s - 2.7 s
Scanning time (high definition mode)	2.1 s - 3.6 s
Connection	Ethernet RJ-45
Dimensions	L. 154 x D. 204 x H.193mm
Weight	2.6kg
Supply voltage	100 - 240V ~ 50 - 60Hz

PLATES	
Size 0 Dimensions	22x35mm
Size 1 Dimensions	24x40mm
Size 2 Dimensions	31x41mm
Size 3 Dimensions	27x54mm
Size 4 Dimensions (3 x Size 3 plates)	69x54mm

Windows®	Minimum required configuration	Recommended configuration
Operating System	Windows® 10 Pro	Windows® 10 Pro
Processor	Intel® Core i5	Intel® Core i7 or more
RAM	16 GB	16 GB
Hard drive	250 GB	1 TB or more
USB ports	1 USB 3.1 Gen1 Super Speed	1 USB 3.1 Gen1 Super Speed
Graphics card	1 GB RAM	Chipset Nvidia® or ATI® / Unshared memory 2 GB RAM
USB Chipset	Intel or NEC® / RENESAS®	Intel or NEC® / RENESAS®
Screen resolution	1920 x 1080	1920 x 1080
Ethernet card	100 Mbps - 1 Gbps	1 Gbps

BENEFITS OF AN INTRAORAL CAMERA

An intraoral camera shows pathologies on an image that can be used to easily explain clinical procedures to the owners of the animals in your care.
Showing a clear and detailed image can **promote dialogue** and enable you to counter objections and address the concerns of pet owners. This is not just about **sharing images** of their pets, it is primarily about helping them to understand the **importance of oral-dental hygiene**.

Opting for an ACTEON® intraoral camera will also enable you to **optimize patient follow-up** by saving the images chronologically and for each tooth in the imaging software. As a practician, you can therefore monitor changes to lesions and to the oral-dental hygiene of animals simply and effectively.

C50

An excellent communication tool

The Full HD **C50** intraoral camera ensures that everything you need to see is at your fingertips.

EXCEPTIONAL EXAMINATION QUALITY

- **Full HD**: clear and detailed image ensuring a more reliable diagnosis and providing a visual communication support between veterinary doctors and pet owners, who will likely be more receptive to suggested treatments.
- **Autofocus**: saves time and produces a reliable image to ensure ease of use for the practitioner
- **Macro vision**: a facilitated clinical assessment due to an ultra-clear image of fissures and caries
- **Depth of field**: a camera with 5 viewing angles, easily accessible using the intuitive buttons

UNIQUE CLINICAL FLEXIBILITY

Its 4 viewing modes ensure an accurate and reliable diagnosis, covering a wide range of cases:

- **Daylight Mode**: record of natural colors for a better interpretation of tooth shade, pathology identification and patient follow-up

Options*:

- **Daylight+ Mode**: high contrasts emphasizing anatomic fissures and details of the dentin structure
- **Perio Mode**: enhancement of dental plaque and gingival inflammation using chromatic amplification
- **Cario Mode**: caries detection using the LED fluorescence technique

Clinically proven for use in human dentistry only
*the 3 modes are not included as standard

C50

C50 INTRAORAL CAMERA with diagnostic aid		*S_C50_0001*
C50 INTRAORAL CAMERA DAYLIGHT without diagnostic aid		*S_C50_0002*

C50 ACCESSORIES

C50 INTRAORAL CAMERA COVER pack of 500	*403 050*

C50 TECHNICAL CHARACTERISTICS

Sensor	CMOS
Resolution	1920x1080px
Sensitivity	2 lux
Frames per second (FPS)	25 - 30
Image format	16/9
Bulbs	6 white LEDs and 2 blue LEDs
Focus adjustment	Auto focus
4 viewing modes	DAYLIGHT mode If activated option: DAYLIGHT+ mode, PERIO mode and CARIO mode
Depth of field	From portrait to macro
Image capture	Capture button or footswitch (optional)
Viewing angle	75°
Cable length	3 m
USB output	3.0
Power consumption	4.5W max.
Handpiece dimensions	L. 200 x W. 30 x H. 24mm
Handpiece weight	100g
International Protection (IP) marking	Protection from dust and sealing IP53

	Minimum required configuration
Operating System	Windows® 10 Pro
Processor	Intel® core i5
RAM	16 GB
USB ports	USB 3.1 Gen1 Super Speed
USB Chipset	Intel® or NEC® / RENESAS®

Intuitive and complete software

SOPRO® IMAGING VETERINARY

- Creation of complete dental statuses
- Image and video capture
- Addition of comments
- Printing, sending by e-mail and export of all data. The Sopro® Imaging Veterinary software is easy to install and use when it is configured in an IT network
- Dental diagrams available (cat, dog, rabbit, feline, canine)
- User-friendly and intuitive
- Multilingual software (27 languages available)
- Compatible with Windows® and frequently updated
- User-friendly database to save all patient information

SOPRO® IMAGING VETERINARY   *505020*

WINDOWS COMPATIBLE
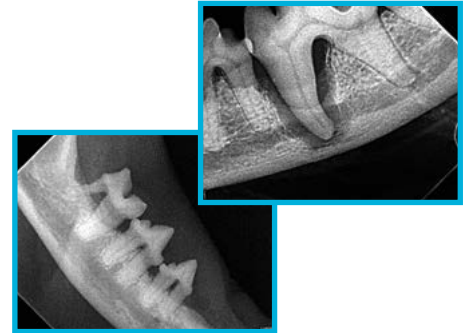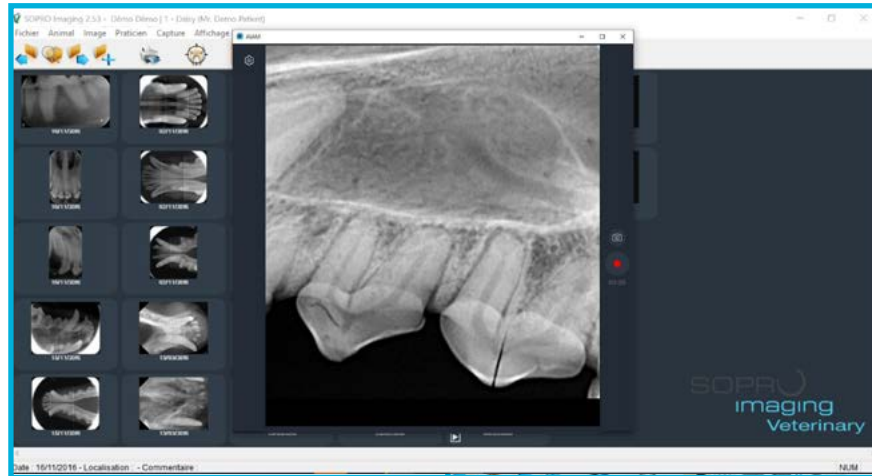
Courtesy: Dr. Boutoille (France)

ACTEON® NON-SURGICAL TREATMENTS

FACTS & FIGURES

SCALING AND TREATMENT OF PERIODONTAL POCKETS

Periodontal disease is characterised by the build-up of a bacterial film on the surface of the teeth (Bacterial Dental Plaque). This causes inflammation of the gums (gingivitis) and destruction of the tissues surrounding the tooth: alveolar bone, periodontal ligament and cementum (periodontitis).
Bacterial dental plaque forms a bacterial biofilm that stubbornly adheres to the surface of the teeth and is resistant to chemical agents. Mechanical biofilm disruption is essential. Scale forms when the bacterial dental plaque calcifies but is not the etiologic agent of the periodontal disease *(Fig. 1 & 2)*.

©ADVETIA

Fig. 1: Serious periodontitis in a dog

©ADVETIA

Fig. 2: Periodontitis in the terminal phase requiring extractions

Scale is caused by bacterial dental plaque and is closely linked to it. It needs to be removed to get rid of the bacterial dental plaque. Scale is eliminated by fragmentation using an ultrasound instrument.

<u>Not only is it important to remove the visible supragingival scale/bacterial dental plaque, but it is also - and especially - important to remove the subgingival scale/bacterial dental plaque built up along the surface of the root, deep down in the periodontal pocket.</u>

• Around 75% of dogs and cats suffer from periodontal disease (Bell A.F., 1965; Verhaert 2000)
• 60% of dogs present with periodontitis (Kyllar et al. 2005)
• 80% of small dogs aged over 5 present with moderate to severe periodontitis, characterized by bone destruction (Hamp, 1975)

ENDODONTICS

• Approximately 25% of dogs and cats present with at least one broken tooth (Golden, 1982; Crossley, 1991).
• One broken tooth of which the dental pulp was exposed, is infected. Endodontics is therefore necessary to avoid having to extract the tooth.
• It was shown that, in dogs, a well-executed conventional root canal treatment has an overall success rate of 95% (Kuntsi-Vaattovaara et al., JAVMA, 2002).
• It was shown that, in dogs, a partial vital pulpectomy, along with a well-executed conventional root canal treatment with MTA has an overall success rate of 92% (Luotonen et al., JAVMA, 2002).

Except for subgingival scaling/debridement and tooth extractions, other branches of dentistry often require more specialist equipment offering, among other functions, the option to rinse and dry the surfaces of the teeth. For these procedures, a compressed air source is essential (restorative dentistry, prosthesis, orthodontics).
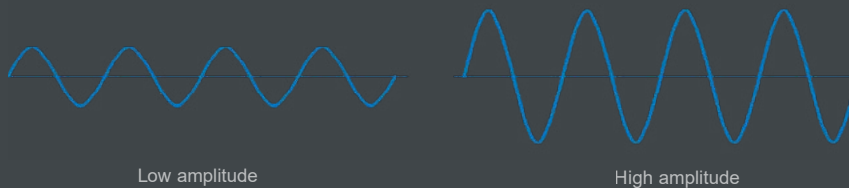
ABOUT ULTRASOUNDS

ABOUT ULTRASOUNDS

The sound is a mechanical vibration that passes through different elements: water, air, metal, etc. These soundwaves are classified into 3 categories and are defined based on the two key notions of their frequency and their amplitude.

20Hz	200Hz	2000Hz	20,000Hz
Infrasound	**Audible to humans**		**Ultrasound**
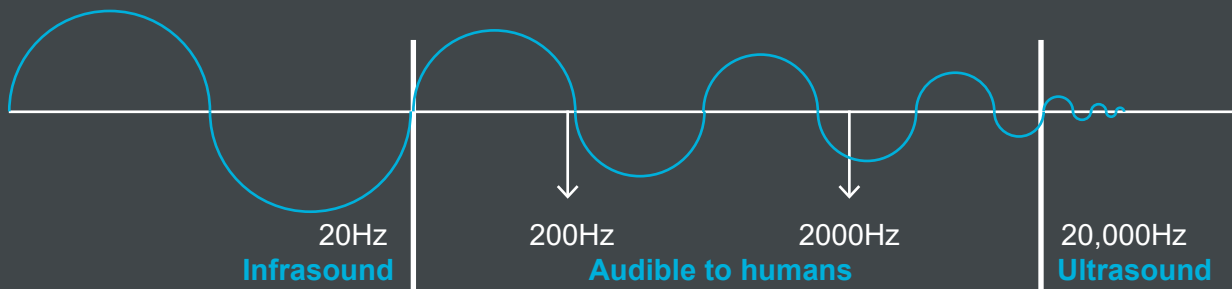
AMPLITUDE (in μm): size of displacement, changes as a function of power adjustments

Low amplitude   High amplitude

This corresponds to the distance covered by the tip achieved by vibrational movement.

FREQUENCY (in Hz): vibration speed, change under a load

Low frequency   High frequency
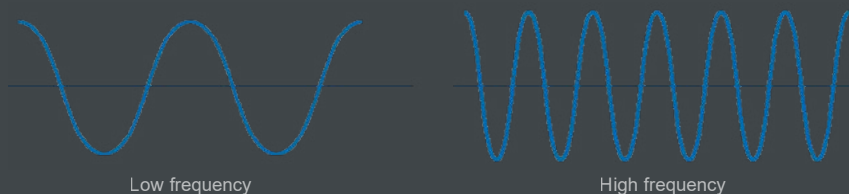
This corresponds to the number of out-and-back movements of the tip per second.

When the frequency exceeds **20kHz**, we talk about **ultrasounds**.

These soundwaves can be generated in several different ways:

- **Pneumatic/sonic systems**: compressed air that excites a metal surface
- **Magnetostrictive systems**: application of a magnetic field on a metal surface
- **Piezoelectric systems**: electric current applied to ceramics

CAVITATION

Biological effects

When ultrasound waves spread through a liquid, a phenomenon known as "cavitation" intensifies the energy emitted by the tip.

Small cavities form and implode under the effect of vibrations, creating a powerful mechanical action, which breaks up and eliminates deposits and dental plaque.
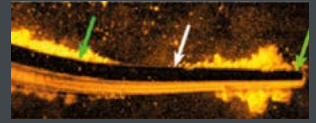At the same time, the implosion of the cavities releases oxygen, which is known for its cleansing and disinfecting properties.
Cavitation is an essential phenomenon: it must occur at the end of the tip, where the tip is active, to cool it and optimize the effect of the ultrasounds.

Cavitation

Tip 1 at maximum power

SPOTLIGHT ON PIEZOELECTRICITY

How it works

The ultrasonic piezoelectric system works by way of an alternating electric current applied to ceramic discs in a transducer. Their distortion creates linear vibrations at the tip, through the centre of the ultrasonic handpiece. By way of comparison, sonic or magnetostrictive devices create heterogeneous or elliptical vibrations.

Thus, by applying the tip parallel to the tooth, the practitioner benefits from a sweeping movement that very efficiently removes built-up scale.
A tapping effect (axial vibrations) can also be obtained to tackle hard-to-remove deposits. This process can be used as required, in specific cases, and never directly on the enamel.

In order to reduce noise, it is generally better to use the device tangentially. The noise made when the tip makes contact with the teeth is inversely proportional to the efficacy and safety of the treatment.

ACTEON® via Satelec® was the first company to use piezoelectricity in the field of dentistry, in 1972.

Piezoelectricity VS pneumatic/magnetic

	PNEUMATIC/ SONIC	MAGNETIC	PIEZOELECTRICITY
Frequency	2 to 6KHz	20 to 50KHz	28 to 36KHz
Ultrasound	No	Yes	Yes
Handpiece temperature	Very hot	Hot	Warm
Volume of water to adjust the handpiece temperature	High	Normal	Low
Effect of cavitation	No cavitation	Yes	Yes
Tip vibration	Intermittent	Elliptical	Linear

The advantages of piezoelectricity

TECHNICAL ADVANTAGES	CLINICAL ADVANTAGES
• Linear movement of the tip	• Easy control of the movement over the tooth surface • Improved tactile sensing for a more accurate treatment • Gentle on the teeth when used tangentially • Subgingival scaling/debridement possible with different shaped tips • Effective and rapid removal of chunks of scale • Wide range of tips of different shapes
• Amplitude of 20 to 300 microns	• Wide range of possible applications: thin build-ups of subgingival scale to thick chunks of supragingival scale
• Minimal thermal stress • Less water required	• No thermal stress • Option to adapt the irrigation spray to improve visibility of the operating field
• Energy loss < 10%	• Maximum efficacy
• Ergonomic handpiece	• Detachable and autoclavable handpiece
• Less hand muscle fatigue	• Improved hygiene

NEWTRON® TECHNOLOGY

newtron

How it works

Depending on the shape, alloy, weight and other features of each tip, the frequency and the amplitude vary when a pressure is applied.

Thus, with the Newtron® patented technology, the management of this change in frequency, as well as the perfect control of the constant amplitude, occur automatically as a function of all the settings: tip type (shape, weight, etc.) and the charge applied.

The harmonious operation of the electric module with the handpiece and the tips therefore ensures excellent efficiency and better clinical benefits:

PRESERVATION	
Controlled vibrations	Precise treatment that is gentle on tissues
Quality tip	Preservation of the anatomy of the enamel
Controlled irrigation	No heating: safer for tissues

EFFICIENCY	
Adjusted frequency	Optimal and continuous efficiency, regardless of the charge applied
Controlled power	Consistent performance, no pressure required
Powerful cavitation	Fragmentation and elimination of deposits, cleansing and disinfecting effect

COMFORT	
Linear and even vibrations	Preserved tactile sensing
	Less labour-intensive for practitioners
	Treatment less traumatic for the animal

newtron

A daily use, for all clinical applications

The Newtron® series combines all of the ACTEON® clinical and technical expertise to assist veterinarians daily in providing the best treatments possible. Perfect ultrasonic vibrations, associated with high-quality tips, preserve the teeth and guarantee safe treatments.

PRECISION

Precision treatments using the patented Newtron® technology.

PRESERVATION

Preservation of tissues due to automatic and continuous frequency adjustment.

COMFORT

Comfort for the patient and practitioner due to the regulation of power in real time.

A DESIGN TAILORED TO YOUR NEEDS

Newtron® generators are both elegant and user-friendly, designed to meet the needs of the dentistry profession.

- **An elegant device**: flat glass surface, sleek style and lights around the dial
- **Optimal ergonomics**: front panel inclined to ensure better interaction with the practitioner and better access to the controls and the handpiece
- **Compliance with hygiene requirements**
    - Detachable dial for easy cleaning
    - Completely sealed
    - Thin, balanced Newtron® handpiece
    - Ergonomic shape with the handle in any position, with flexible cord
    - Titanium core for ultra-corrosion resistance
- **Exclusive handpiece holders** to prevent dropping of the handpiece are installed on the front or on the side of the device. The silicone holders are detachable and autoclavable.

A COLOR CODE FOR INTUITIVE OPERATION

MEDIUM POWER

HIGH POWER

The Color Coding System™

associates each tip color with the color of the **Newtron®** generator power ranges.

LOW POWER

BOOST
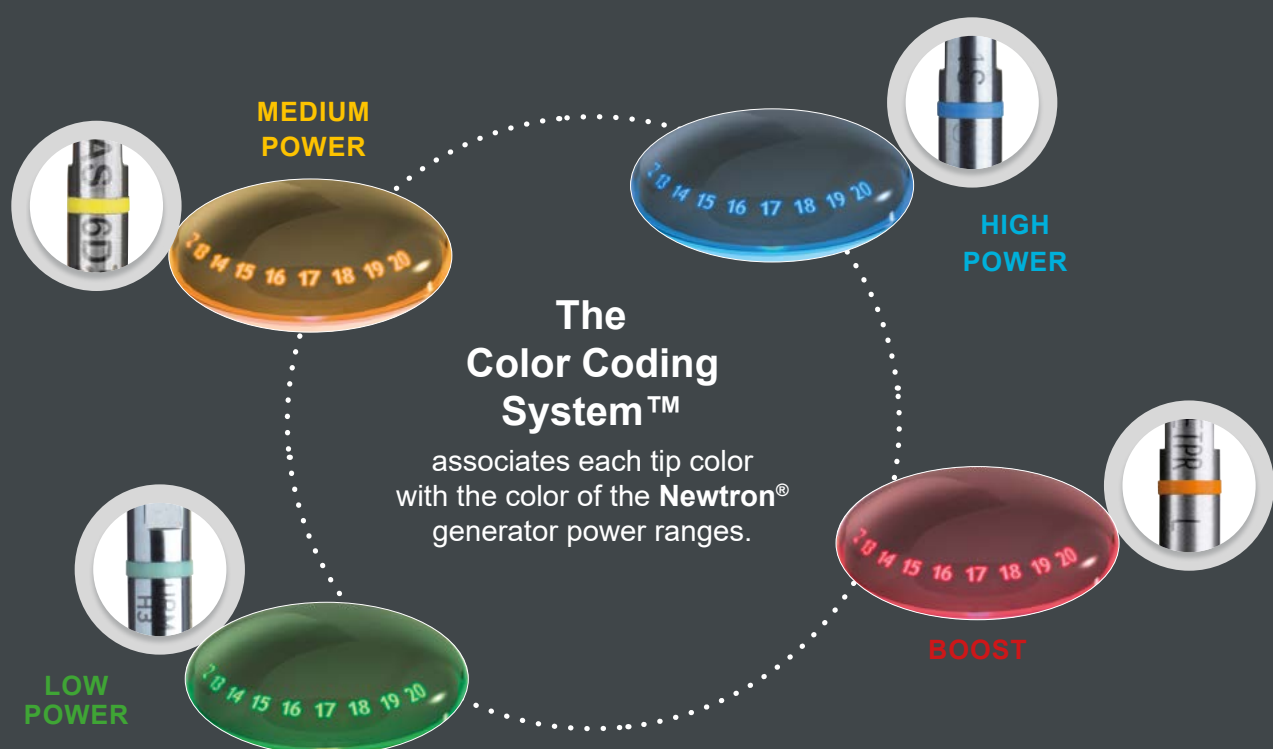
NEWTRON® P5 XS B-LED VET

Delivered with a non-disconnectable footswitch, a power supply, a NEWTRON® SLIM B.LED handpiece cord, a NEWTRON® SLIM B.LED handpiece with a white ring, a F.L.AG™ for B.LED dental plaque discloser (5x 1.5ml), a universal wrench, No. 1, 1S, PV1 tips and a 500ml tank.

Dimensions (LxDxH): 260x145x155mm
Weight: 1.7kg

F62109

NEWTRON® P5 XS VET

Delivered with a non-disconnectable footswitch, a power supply, a NEWTRON® handpiece cord, a NEWTRON® handpiece, a universal wrench, No. 1, 1S, 10Z tips and a 300ml tank.

Dimensions (LxDxH): 260x145x155mm
Weight: 1.7kg

F62111

NEWTRON® P5 B-LED VET

Delivered with a non-disconnectable footswitch, a power supply, a NEWTRON® SLIM B.LED handpiece cord, a NEWTRON® SLIM B.LED handpiece with a white ring, a F.L.AGTM for B.LED dental plaque discloser (5x 1.5ml), a universal wrench, and No. 1, 1S, PV1 tips.

Dimensions (LxDxH): 156x186x102mm
Weight: 1.65kg

F61109

NEWTRON® BOOSTER VET

Delivered with a non-disconnectable footswitch, a power supply, a NEWTRON® handpiece cord, a NEWTRON® handpiece, a universal wrench, and No. 1 tip.

Dimensions (LxDxH): 130x161x88mm
Weight: 1.11kg

F60203

NEWTRON® ACCESSORIES

	NEWTRON® SLIM B.LED HANDPIECE With white LED ring for NEWTRON® P5 XS B-LED VET and NEWTRON® P5 B-LED VET	*F12905*
	NEWTRON® HANDPIECE Autoclavable, light gray/dark gray for NEWTRON® P5 XS VET and NEWTRON® BOOSTER VET	*F12281*
	NEWTRON® SLIM B.LED WHITE LED RING	*F12915*
	NEWTRON® SLIM B.LED HANDPIECE CORD Non-disconnectable	*X00226*
	NEWTRON® HANDPIECE CORD Non-disconnectable	*X00244*
	FOOTSWITCH	*F00061*
	HANDPIECE HOLDER Silicone	*E60108*
	300ml tank	*F62004*
	500ml tank	*F62005*

SUMMARY

	newtron booster	**newtron P5 b-led**
Clinical application	Prophylaxis, endodontics	Prophylaxis, endodontics
Technology	Newtron®	Newtron®
LED	-	✓
Handpiece	Newtron®	Newtron® Slim B.LED
Frequency	28-36kHz	28-36kHz
Irrigation	Water pump or mains	Water pump or mains
Dimensions in mm (LxDxH)	130x161x88	156x186x102
Weight in kg	1.1	1.65

	newtron P5XS	newtron P5XSb-led
Clinical application	Prophylaxis, endodontics	Prophylaxis, endodontics
Technology	Newtron®	Newtron®
LED	-	✓
Handpiece	Newtron®	Newtron® Slim B.LED
Frequency	28-36kHz	28-36kHz
Irrigation	Built-in tank	Built-in tank
Dimensions in mm (LxDxH)	260x145x155	260x145x155
Weight in kg	1.7	1.7

ACTEON® tips

> **An extensive and multipurpose series of tips interacting harmoniously with the handpiece and the device to ensure optimal performance**

THE MOST EXTENSIVE SERIES OF TIPS ON THE MARKET

Managing ultrasounds does not only involve the design of generators and control software, but also the design of compatible accessories in order to optimize their vibratory power and guarantee their reliability.

With nearly 80 different exclusively designed alloy and coated tips, ACTEON® offers the most extensive range of instruments covering all clinical fields.

For each clinical indication, Newtron® tips are made of exclusive alloys that can be used to safely treat enamel, prostheses and implants.

The power used is precisely defined using the Color Coding System™, which intuitively associates each tip with one of the 4 power ranges.

GREEN RING
Low power and amplitude

YELLOW RING
Medium power and amplitude

BLUE RING
High power and amplitude

ORANGE RING
Very high power and maximum amplitude

A COLOR CODE ADAPTED TO EACH CLINIC

- The color code determines the power that offers the best safety/performance ratio (no breaking of instrumentation/amplitude and resistance at the ideal charge).

- Immediate identification of the recommended power range on the ultrasonic generator screen and on the instrument, throughout the period of use.

- Due to the use of personal keys and storage boxes, prevention of cross-contamination risk for the user and auxiliary staff.

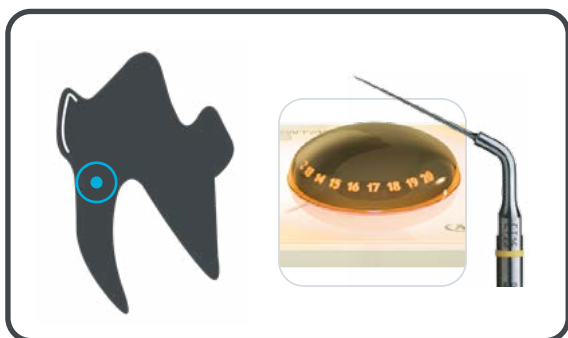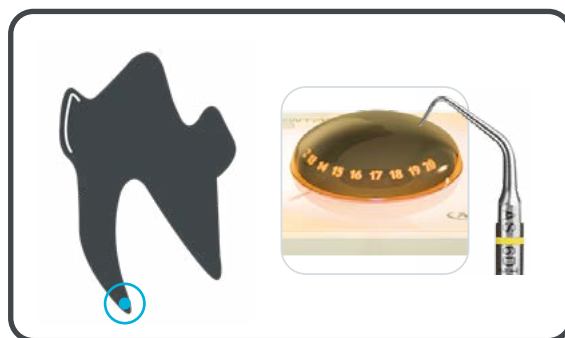- Marking is resistant to decontamination and sterilization.

PROPHYLAXIS

PERIODONTICS
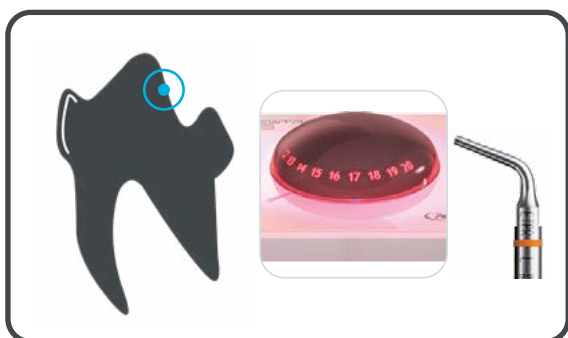

ENDODONTICS

SURGICAL ENDODONTICS

RESTORATIVE AND PRESERVATION DENTISTRY

endovet

Endovet kit
F88190

endodontics

Root canal filling

PLU60
F88191

PLU90
F88192

PLU110
F88193

SPR30
F88194

SPR60
F88195

SPR80
F88196

Endodontics - Irrigation

K10-21 (x4)
F43710
Ø0.1/ Length 21mm

K10-25 (x4)
F43712
Ø0.1/ Length 25mm

K15-21 (x4)
F43715
Ø0.15/ Length 21mm

K15-25 (x4)
F43717
Ø0.15/ Length 25mm

K25-21 (x4)
F43725
Ø0.25/ Length 21mm

K25-25 (x4)
F43727
Ø0.25/ Length 25mm

K30-21 (x4)
F43730
Ø0.3/ Length 21mm

K30-25 (x4)
F43732
Ø0.3/ Length 25mm

irrisafe

endodontics

Ultrasonic passive irrigation

IRR 20-21 (x4)
F43807
Ø0.2/ Length 21mm

IRR 20-25 (x4)
F43808
Ø0.2/ Length 25mm

IRR 25-21 (x4)
F43805
Ø0.25/ Length 21mm

IRR 25-25 (x4)
F43806
Ø0.25/ Length 25mm

IRR 25-45 (x1)
F43809
Ø0.25/ Length 45mm

Retreatment

ET40
F88012
Length 40mm

ET40D
F88014
Length 40mm,
diamond-coated

ET20D
F88013
Length 20mm, diamond-coated

endosuccess retreatment

Retreatment

ET18D
F880017
Cavity access finishing

ETBD
F88020
Exploration

ET25
F88018
Ti-Nb tip

ET25L
F88022
Long Ti-Nb tip

ET20
F88011
Universal

endosuccess apical surgery

Apical surgery

AS3D
F00065
Ø0.1/ Length 21mm

AS6D
F00079
Ø0.1/ Length 25mm

AD9D
F00067
Ø0.15/ Length 25mm

ASLD
F00080
Ø0.25/ Length 21mm

ASRD
F00081
Ø0.3/ Length 21mm

periodontics

Curette & debridement

PV1
F00259
Subgingival debridement

H4L
F00114
Premolars & molars
Left curvature

H4R
F00115
Premolars & molars - Right curvature

perio precision

Precision periodontics

P2L
F00090
Debridement narrow pockets - Left curvature

P2R
F00091
Debridement narrow pockets - Right curvature

ACTEON®
Original
TIPS

scaling

ACTEON®
Original
TIPS

Scaling

No. 1
F00246
Universal

No. 2
F00247
High power

10X
F00359
Interproximal

10Z
F00254
Subgingival

No. 1S
F00245
Supragingival and subgingival

ENDOVET KIT

The EndoVet kit can be used to facilitate the root canal filling protocol. It can be used to perform an ultrasonic passive irrigation using the 25-45 Irrisafe file, a lateral thermocompaction with SPR 30, 60 and 80 condenser type pluggers, and an ultrasonic vertical thermocompaction with PLU 60, 90 and 110 compactor type pluggers.

Filling performed with an SPR 80

endovet

ENDOVET KIT
Comes with PLU60, PLU90, PLU110, SPR30, SPR60, SPR80,
Irr 25/45 and a universal wrench

F88190

TIP SETTINGS

	Series newtron	IRRIGATION
1 / 2 / 1S	14	medium spray
10X / 10Z	12	medium spray
PV1 / H4L / H4R	2	drop-by-drop
P2L / P2R	3	drop-by-drop
PLU60 / PLU90 / PLU110	3	no irrigation
SPR30 / SPR60 / SPR80	3	no irrigation
IRR20-21 / IRR20-25 / IRR25-21 / IRR25-25 / IRR25-45	6	high spray
K10 / K15 / K25 / K30	6	high spray
ET20D / ET40 / ET40D	7	high spray
ET18D	10	high spray
ET20 / ET25 / ET25L / ETBD	7	medium spray
AS3D / AS6D	7	drop-by-drop
AS9D	6	drop-by-drop
ASLD / ASRD	7	high spray

drop-by-drop   medium spray   high spray   no irrigation

SUPRAGINGIVAL SCALING

Tip No. 1 must be used tangentially to the tooth surface at an angle of no greater than 15°. As scale is essentially broken down by the vibration of the tip, the latter must not press heavily on the tooth but must just lightly sweep across the tooth surface. The end of the tip must not be used perpendicularly to the surface *(Fig. 3)*.

Fig. 3: Supragingival scaling with tip No. 1

SUBGINGIVAL SCALING (shallow pockets)

The No. 1S tip is thinner and longer than No. 1 tip and can therefore be used for more delicate procedures and a combination of supragingival and subgingival work. It is mostly used for supragingival scaling on small dogs and cats *(Fig. 4)*.
For subgingival work, the tip must be passed lightly at an oblique angle over the root, starting from the bottom of the periodontal pocket *(Fig. 5)*.

Fig. 4: Supragingival scaling with No. 1S tip

Fig. 5: Subgingival scaling with No. 1S tip

SUBGINGIVAL SCALING (deep pockets)

The PV1 (PerioVet1) tip is a subgingival tip exclusively designed for veterinary use. It resembles a universal manual curette.

The PV1 tip is inserted into the periodontal pocket parallel to the root surface (*Fig 6 & 7*).
A sweeping movement over the surface of the root, from bottom to top, is then performed, pressing very gently. Curettes are generally pushed down. The tip must work in contact with the root only, without exerting excessive lateral pressure on the tooth. The PV1 tip is ideally designed to perform effective debridement and to preserve the tissues.

©ADVETIA   ©ADVETIA

Fig. 6 & 7: Subgingival debridement with the PV1 tip inserted into the periodontal pocket

FACTS & FIGURES

- Bacterial Dental Plaque forms less rapidly on the teeth of a dog if scaling is followed by a polishing (Pollmeier S, 1994).

- Polishing is the final step after scale and bacterial dental plaque has been removed from the dental crown and roots. It can be used to obtain a better surface condition that makes it more difficult for the microbial biofilm (bacterial dental plaque) to reform.

- Air polishing with glycine powder can be carried out as a subgingival procedure to obtain results that are clinically significant for plaque and gingival index values. From a histology point of view, it causes less gingival erosion than air polishing with sodium bicarbonate or ultrasonic instruments (Simon et al., Int J Dental Hyg, 2015).

air max

Quick and safe prophylaxis procedures for exceptional results

MULTIPURPOSE AND MULTI-STATION

The AirMax® can be easily installed using a quick-connect system at different workstations, such as a mobile unit, with risk of leak.

- Active, complete and even polishing
- Robust and reliable
- Comfortable, quick and fatigue-free work

SIMPLICITY, EFFICACY, COMFORT AND EFFICIENCY

- Built-in water heater, water and powder sprayed at ambient temperature
- Automatic purge, at pressure, the system is purged to reduce clogging risks
- Transparent powder container for better visualisation of power level

AIRMAX®
Comes with a ProphyPen handpiece and its 135° titanium nozzle, a universal wrench, a 250g bottle of mint-flavoured powder, a 250g bottle of lemon-flavoured powder

F11400

AIRMAX® ACCESSORIES

WHITE PROPHYPEN HANDPIECE
Disconnectable polisher handpiece (bayonet)
Comes with a 135° titanium nozzle and a universal wrench

F10557

135° Ø0.7mm TITANIUM NOZZLE

F10555

FOOTSWITCH

F00046

Ø0.7mm PROBE
To clean the nozzle

E96221

Ø 1mm PROBE
To clean the body of the ProphyPen handpiece

F10208

2 PROPHYPEN O-RING AND 1 NOZZLE O-RING KIT

F10374

4 O-RINGS KIT FOR PROPHYPEN HANDPIECE CORD

F10375

**4 x 250g BOTTLES
OF AIR-N-GO® "CLASSIC" POWDER**

F10254

**3 x 160g BOTTLES
OF AIR-N-GO® "PERIO" POWDER**

F10270

air-n-go classic

Gentle and efficient

ACTIVE AND GENTLE POLISHING

The Air-N-Go® "classic" powder was exclusively researched and designed for efficient treatment that is gentle on treated surfaces. It can be used with all ACTEON® air polishers.

• Meticulous cleaning for instant results
• Eliminates bacterial plaque and stains, even in hard-to-reach areas
• Gentle and efficient treatment with minimal bleeding

PREVENTIVE POLISHING

Anti-clogging properties, with controlled hydrophobia, bestowed on the Air-N-Go® "classic" sodium bicarbonate powder with dual action:

• In contact with water, the microparticles lightly contract for more effective polishing
• The powder then gently dissolves to prevent trauma to brittle tissues and prevent risks of the device clogging

AIR-N-GO CLASSIC
Box of 4 x 250g bottles   *F10254*

POLISHING WITH THE AIR POLISHER

Air polishers enable the pressurised spraying of a mist of very fine grain sodium bicarbonate or glycerine particles. This system enables highly effective polishing of tooth surfaces without damage to the gums. The main advantage over cup polishing is better accessibility and efficiency for all hard-to-reach areas (interdental spaces, dental grooves).

It also eliminates more dental plaque and stains from the surface of the teeth than cup polishing (*Fig. 8*).

In addition, as polishing is performed without direct contact between the instrument and the tooth surface, it also eliminates risk of thermal stress.

©ADVETIA

Fig. 8: Polishing with the AirMax®

miniled active

Ready to use

EFFECTIVE CURING AT YOUR FINGERTIPS

- **Efficiency and simplicity in just one click**: Unique 10 sec cycle, with microflash at 5 sec
- **Easy to use**: Smartly balanced, the handpiece does not roll for a protection against falls
- **Work in freedom**: Handy and light (103g) thanks to its integrated battery
- **Long service life**: 100 cycles of 10 sec. to enjoy a full day of polymerization
- **Universal power supply**: battery level indicator

miniled standard

Simply powerful

OUTPERFOMS IN POWER, EFFICIENCY AND SPEED

- **Safety**: Base-charger includes a radiometer for light power intensity check-up
- **Fast**: Only 6 to 12 sec to polymerize 2mm of any composite
- **Optimal result with 3 modes to fit all clinical needs**:

    ### FAST MODE
    Full power during 10 sec (bip at 5 sec) on regular depth

    ### PULSE MODE
    10 flashes of 1 sec (bip after 5 flashes) with times off to preserve dental pulp

    ### RAMPING MODE
    Progressive power increase during 20 sec (bip every 5 sec) for a complete and safe curing

MINILED™ ACTIVE
Comes with a handpiece, a universal power supply cord, a Ø7.5mm opalescent guide and an oval protection shield

F05100

MINILED™ STANDARD
Comes with a handpiece, a battery, a battery charter, a power supply cord with european plug, a Ø7.5mm opalescent guide and an oval light shield

F02507

MINILED™ ACTIVE ACCESSORIES

	UNIVERSAL POWER SUPPLY	*F05120*
	OVAL PROTECTION SHIELD	*F05407*
	Ø7.5mm OPTICAL GUIDE	*F05121*

MINILED™ STANDARD ACCESSORIES

	EUROPEAN POWER SUPPLY	*F02543*
	OVAL LIGHT SHIELD	*F02555*
	Ø7.5mm OPTICAL GUIDE	*F02648*
	Ø5.5mm OPTICAL GUIDE	*F02652*
	TITANIUM BATTERY	*F02520*
	CHARGER	*F02510*

TECHNICAL CHARACTERISTICS

	MINILED™ ACTIVE	**MINILED™ STANDARD**
Power	1492 mW/cm² (Ø7.5mm optical guide)	1250 mW/cm² (Ø7.5mm optical guide)
Dimensions	Ø24.5 x 161mm	Ø23 x 200mm
Weight	103g	160g
Wavelength	420 - 480mm	420 - 480mm

Urolithiasis probes

Ultrasound technology for urethral treatment

GENTLE AND EFFECTIVE

Urolithiasis probes are compatible with all devices in the Newtron® and Cocoon® series. The use of ultrasounds enables this treatment to be carried out quickly and effectively. The urolithiasis probes connect to the device in the same way as the tips.
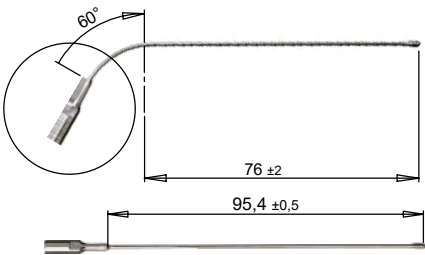
CALCULI PROBES FOR CATS
7,6 - 9,54cm Ø1,65mm (distal part)

F00257
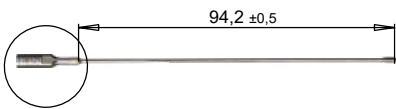
CALCULI PROBES FOR DOGS
9,42cm Ø1,65mm (distal part)

F00256
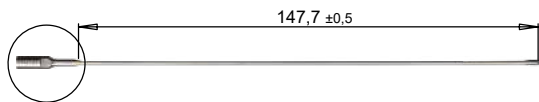
CALCULI PROBES FOR DOGS
14,77cm Ø1,65mm (distal part)

F00258

PROBE SETTINGS

	series newtron	cocoon hygienist	cocoon spray
Calculi probes (cats & dogs)	6-10	8-10	3-5 endo mode

UROLITHIASIS

PREPARING THE ANIMAL

Dogs

- Positioning of the animal:
    - Unsedated: standing
    - Sedated: lateral or dorsal decubitus position (in this case, venal access for the use of a minimum dose of anaesthetic)
- Shaving
- Disinfection (*Fig. 9*)
- Choice of probe depending on the size of the dog (*Fig. 10*)

Fig. 9: Disinfection

Fig. 10: Choice of probe

Cats

- Sedation or mild anaesthetic (intravenous before sedation to minimise dose).
- Dorsal decubitus position
- Shaving:
    - abdominal for a cystocentesis
    - perineal
- Disinfection
- Cystocentesis
- Penis immobilised with a clamp (*Fig. 11*)
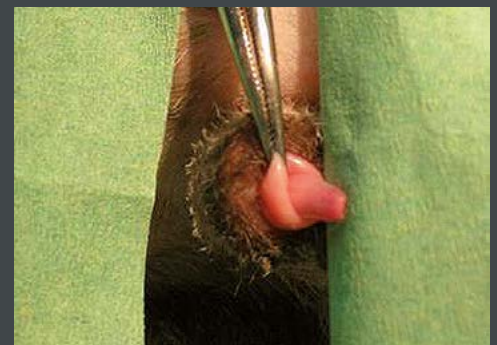
Fig. 11: Penis immobilised with a clamp

UROLITHIASIS

USING THE PROBE

- Sterilise probes before use
- Set the ultrasound device to medium power
- Set the water flow to maximum, continuous spray
- Move the probe forwards and backwards to prevent heating (*Fig. 12)*
- In the case of a single calculus, bring it into regular contact with the probe to break it up.

The proximal urethra is cleared by gradually pushing the probe into the urethra (*Fig. 13*).

Fig. 12: Forwards and backwards movements of the probe

Fig. 13: Clearing of the proximal urethra by gradually pushing the probe into the urethra

ACTEON® SURGICAL TREATMENTS

FACTS & FIGURES

- Of the 184 mandibular teeth (P4 and M1) evaluated by X-ray in 50 dogs weighing under 8kg, more than 50% of the teeth had to be extracted (Hennet P., 2001).

- Of the 128 dogs and cats brought in for a scaling procedure, 297 teeth underwent a simple extraction, 202 teeth underwent an extraction with root separation, and 48 teeth with surgical extraction (Girard N., 2005).

Scaling is a generic term that we should exclude from our language when it is a case of designing any oral-dental surgery in animals (Hennet P., Girard N., 2005). In animals, other than non-surgical periodontal treatment (supragingival scaling, debridement and subgingival polishing), treatment for periodontitis often involves teeth extractions.
Every veterinarian performing dental treatments on dogs and cats must therefore use rotary equipment that enables them to correctly perform all treatments which animals brought in for scaling require.
Tooth extraction can be performed in a number of ways: piezo surgery for less traumatic surgery, or rotary instruments for faster surgery.

cocoon hygienist

> **Your complete dental unit: Ultrasonic Generator / Motor and air/water syringe**

Restorative and operative dentistry require the use of rotary instruments to prepare cavities without damage to the teeth.

It is essential to maintain good oral hygiene as maintaining the function and health of the teeth is important in ensuring the general overall health of our pets.

A COMPLETE DENTAL UNIT

This 2-in-1 product is perfect for dental surgery.

Its ultrasonic generator ensures treatment that is more precise for the practitioner and less traumatic for the patient. The motor of the unit may be used for an extended period of time when performing multiple dental extractions requiring tooth time sectioning or when performing root canal treatment following a crown restoration.

Applications such as exodontics (tooth extraction) or endodontics (root canal treatment) are therefore possible because of the:
- cooling of the micromotor (air + water: built-in spray).
- cooling of the bur (use of a contra-angle with built-in spray).

Cocoon® Hygienist LED can be used for bonding in restorative dentistry, in orthodontics or for fabricating a dental splint in traumatology.

NEWTRON® LED HANDPIECE

The Newtron® LED handpiece, available with Cocoon® Hygienist LED, sheds a 360°, 65,000 lux cool examination light on the operating field. The detachable light guide and nose enable the handpiece to be easily cleaned and decontaminated. The ergonomic handpiece also ensures user-comfort.

AIR/WATER SYRINGE

The built-in air/water syringe enables easy and rapid cleaning of your clinical site.

BUILT-IN SPRAY MICROMOTOR

The auto-adjustable speed is compatible with FG burs (40,000 rpm)
- High torque to ensure preparation precision
- Cooling by built-in spray for improved comfort and to prevent tissue necrosis, as well as to remove debris.

	Bur	Speed setting	Recommended rotation speed
LED contra-angle red ring 1:5 built-in spray	FG Ø1.6	160,000 - 200,000 rpm	
LED contra-angle blue ring 1:1 built-in spray	CA Ø2.35 polishing cup	40,000 rpm	Refer to the manufacturer's recommendations
Handpiece 1:1	HP Ø2.35 length 44mm	40,000 rpm	

- Dimensions (LxDxH): 280x260x100mm
- Weight: 3.8kg
- Frequency: 28-36kHz
- Motor: built-in spray and light, 60 to 40,000 rpm ±10%; clockwise and counterclockwise rotation
- Syringe: Water, Air, Spray (water + air)

CONTRA-ANGLE VS TURBINE

The Cocoon® Hygienist LED functions as a result of a contra-angle, which is directly attached to the micromotor.
A contra-angle provides more comfort and precision than a turbine.

MULTIPLIER CONTRA-ANGLE		TURBINE
Electric or pneumatic	**Power supply**	Pneumatic
Quiet	**Sound level**	Loud
Up to 100W	**Power**	25-30W
Up to 200,000 rpm	**Speed**	Between 100,000 & 500,000 rpm
Yes	**Speed adjustment**	No
Heavier	**Weight**	Lighter
Low	**Vibration**	High
Yes	**"Reverse direction" function**	No
Low	**Aerosol**	High
Less heating	**Heating**	More heating

COCOON® HYGIENIST LED

Comes with a footswitch, an EC (2m) power supply, a NEWTRON® LED handpiece, No. 1, 1S, PV1 tips, a universal wrench, a light motor, 1 box of 250 yellow Riskontrol® syringe tips

Compatible with FG chuck burs

F27021

COCOON® HYGIENIST LED ACCESSORIES

NEWTRON® LED LIGHT HANDPIECE Autoclavable	**F12609**
LIGHT MOTOR	**F28600**
1:5 RED RING CONTRA-ANGLE Internal Spray with integrated light	**F36147**
MEDIUM GREY CORD For light motor	**F33711**
BOX OF 250 YELLOW RISKONTROL® SYRINGE TIPS	**201 666**
RISKONTROL® DCI NV 152 ADAPTER	**200 152**
FOOTSWITCH	**F00045**
F4 PUMP	**F00050**
F4 PUMP + CONNECTOR	**F00051**
COCOON® PRESSURISED BOTTLE	**F24416**
WHITE COCOON® CART Air, water, electricity connections (2 plugs) 3 plates: 40x30cm Dimensions (LxDxH): 45x40x80cm	**F24417**

CONNECTIONS

	CPC MALE CONNECTOR	*E32127*
	CPC FEMALE CONNECTOR	*E32129*
	MALE STÄUBLI COUPLING - WATER	*E49021*
	FEMALE STÄUBLI COUPLING - WATER	*E49010*

TUBING

	WATER PIPE (GREEN)	*A65016*
	AIR PIPE (BLUE)	*A65017*

FILTERS

	FILTERS & O-RING	*F10389*
	COMPLETE FILTER	*F10386*

cocoon spray

Compact and efficient equipment

TRIED-AND-TESTED PIEZOELECTRIC TECHNOLOGY

The Cocoon® Spray ultrasound module benefits from technology developed by ACTEON® guaranteeing:
- Rapidity: cavitation combines with the mechanical elimination of deposits
- Optimal instrument control: the module generates linear vibrations, which are perfectly managed
- Guaranteed power due to auto-adjustable frequency from 27 to 32 kHz and controlled power ("feedback" effect)

EXTERNAL SPRAY MICROMOTOR

- The auto-adjustable speed is compatible with tungsten carbide or diamond burs (40,000 rpm)
- High torque to ensure preparation precision
- Cooling by external spray to prevent tissue necrosis and remove debris.

	BUR	SPEED SETTING	RECOMMENDED ROTATION SPEED
1:3 red ring non-LED contra-angle, external spray	FG Ø1.6	88,000 - 120,000 rpm	Refer to the manufacturer's recommendations
Handpiece 1:1	HP Ø2.35 length 44mm	40,000 rpm	

- Dimensions (LxDxH): 280x260x100mm
- Weight: 3.8kg
- Frequency: 27-32kHz
- Motor: external spray, 60 to 40,000 rpm ±10%; clockwise and counterclockwise rotation

The Cocoon® Spray is designed for short and minor surgical procedures.

COCOON® SPRAY VET

Comes with a footswitch, an EC power supply (2m),
a Suprasson® handpiece, a No. 1 tip, a universal wrench,
a self-ventilated motor   **F24483**

Comes with a footswitch, an EC power supply (2m),
a Suprasson® handpiece, a No. 1 tip, a universal wrench,
a self-ventilated motor, 1:3 external spray contra-angle   **F24489**

COCOON® SPRAY VET ACCESSORIES

1:3 RED RING CONTRA-ANGLE
External spray   **F36120**

IRRIGATION CONNECTOR   **X36121**

SUPRASSON® HANDPIECE
Autoclavable   **F12200**

P.E. STER CORD 2m   **F00475**

SELF-VENTILATED MOTOR   **F28502**

FOOTSWITCH   **F00045**
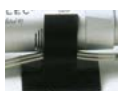
CLIP MOTOR HOLDER   **E38055**

F4 PUMP   **F00050**

F4 PUMP + CONNECTOR   **F00051**

WHITE COCOON® CART
Air, water, electricity connections (2 plugs)
3 plates: 40x30cm
Dimensions (LxDxH): 45x40x80cm   **F24417**

SUMMARY

	cocoon hygienist	cocoon spray
Clinical applications	Scaling, resurfacing, polishing, extraction, endodontics	Scaling, resurfacing, polishing, simple extraction, endodontics
Technology	Newtron®	Suprasson
LED	✓	-
Handpiece	Newtron®	Suprasson
Frequency	28-36kHz	28-36kHz
Irrigation	Water pump or mains	Water pump or mains
Dimensions in mm (LxDxH)	280x260x100	280x260x100
Weight in kg	3.8	3.8
Micromotor	Yes (LED)	Yes (non-LED)
Micromotor speed	0-40,000 rpm	0-40,000 rpm
Micromotor cooling	Internal	External
Type of contra-angle	1:5 red ring LED contra-angle, built-in spray 1:1 blue ring contra-angle, built-in spray 1:1 handpiece	1:3 red ring non-LED contra-angle, external spray 1:1 handpiece
Air/Water Syringe	✓	-
Air compressor (not supplied)	✓ 4 to 6 bars	-

ACTEON® tips

> **An extensive and multipurpose series of tips interacting harmoniously with the handpiece and the device to ensure optimal performance**

THE MOST EXTENSIVE SERIES OF TIPS ON THE MARKET

Managing ultrasounds does not only involve the design of generators and control software, but also the design of compatible accessories in order to optimize their vibratory power and guarantee their reliability.

With nearly 80 different exclusively designed alloy and coated tips, ACTEON® offers the most extensive range of instruments covering all clinical fields.

For each clinical indication, Newtron® tips are made of exclusive alloys that can be used to safely treat enamel, prostheses and implants.

The power used is precisely defined using the Color Coding System™, which intuitively associates each tip with one of the 4 power ranges.

GREEN RING
Low power and amplitude

YELLOW RING
Medium power and amplitude

BLUE RING
High power and amplitude

ORANGE RING
Very high power and maximum amplitude

A COLOR CODE ADAPTED TO EACH CLINIC

- The color code determines the power that offers the best safety/performance ratio (no breaking of instrumentation/amplitude and resistance at the ideal charge).

- Immediate identification of the recommended power range on the ultrasonic generator screen and on the instrument, throughout the period of use.

- Due to the use of personal keys and storage boxes, prevention of cross-contamination risk for the user and auxiliary staff.

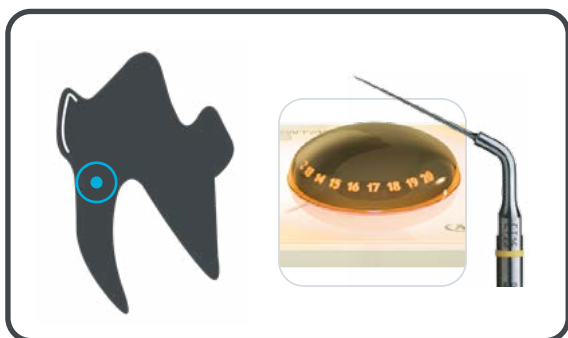- Marking is resistant to decontamination and sterilization.

PROPHYLAXIS

PERIODONTICS

ENDODONTICS

SURGICAL ENDODONTICS

RESTORATIVE AND PRESERVATION DENTISTRY

endovet

Endovet kit *F88190*

endodontics

Root canal filling

PLU60
F88191

PLU90
F88192

PLU110
F88193

SPR30
F88194

SPR60
F88195

SPR80
F88196

Endodontics - Irrigation

K10-21 (x4)
F43710
Ø0.1/ Length 21mm

K10-25 (x4)
F43712
Ø0.1/ Length 25mm

K15-21 (x4)
F43715
Ø0.15/ Length 21mm

K15-25 (x4)
F43717
Ø0.15/ Length 25mm

K25-21 (x4)
F43725
Ø0.25/ Length 21mm

K25-25 (x4)
F43727
Ø0.25/ Length 25mm

K30-21 (x4)
F43730
Ø0.3/ Length 21mm

K30-25 (x4)
F43732
Ø0.3/ Length 25mm

irrisafe

endodontics

Ultrasonic passive irrigation

IRR 20-21 (x4)
F43807
Ø0.2/ Length 21mm

IRR 20-25 (x4)
F43808
Ø0.2/ Length 25mm

IRR 25-21 (x4)
F43805
Ø0.25/ Length 21mm

IRR 25-25 (x4)
F43806
Ø0.25/ Length 25mm

IRR 25-45 (x1)
F43809
Ø0.25/ Length 45mm

Retreatment

ET40
F88012
Length 40mm

ET40D
F88014
Length 40mm,
diamond-coated

ET20D
F88013
Length 20mm, diamond-coated

endosuccess retreatment

Retreatment

ET18D
F880017
Cavity access finishing

ETBD
F88020
Exploration

ET25
F88018
Ti-Nb tip

ET25L
F88022
Long Ti-Nb tip

ET20
F88011
Universal

endosuccess apical surgery

Apical surgery

AS3D
F00065
Ø0.1/ Length 21mm

AS6D
F00079
Ø0.1/ Length 25mm

AD9D
F00067
Ø0.15/ Length 25mm

ASLD
F00080
Ø0.25/ Length 21mm

ASRD
F00081
Ø0.3/ Length 21mm

periodontics

Curette & debridement

PV1
F00259
Subgingival debridement

H4L
F00114
Premolars & molars
Left curvature

H4R
F00115
Premolars & molars - Right curvature

perio precision

Precision periodontics

P2L
F00090
Debridement narrow pockets - Left curvature

P2R
F00091
Debridement narrow pockets - Right curvature

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Original
TIPS

scaling

Scaling

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Universal

No. 2
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High power

10X
F00356
Interproximal

10Z
F00254
Subgingival

No. 1S
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Supragingival and subgingival

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Original
TIPS

ENDOVET KIT

The EndoVet kit can be used to facilitate the root canal filling protocol. It can be used to perform an ultrasonic passive irrigation using the 25-45 Irrisafe file, a lateral thermocompaction with SPR 30, 60 and 80 condenser type pluggers, and an ultrasonic vertical thermocompaction with PLU 60, 90 and 110 compactor type pluggers.

Filling performed with an SPR 80

endovet

ENDOVET KIT
Comes with PLU60, PLU90, PLU110, SPR30, SPR60, SPR80,   *F88190*
Irr 25/45 and a universal wrench

TIP SETTINGS

	cocoon hygienist	cocoon spray	IRRIGATION
1 / 2 / 1S	7-8	7-9 Scaling mode	
10X / 10Z	6-7	1-4 Scaling mode	
PV1 / H4L / H4R	1-2	2 Perio mode	
P2L / P2R	1-2	2 Perio mode	
PLU60 / PLU90 / PLU110	3	1-3 Endo mode	
SPR30 / SPR60 / SPR80	3	1-3 Endo mode	
IRR20-21 / IRR20-25 / IRR25-21 / IRR25-25 / IRR25-45	5	6-8 Endo mode	
K10 / K15 / K25 / K30	3	3-4 Endo mode	
ET20D / ET40 / ET40D	4	4-5 Endo mode	
ET18D	4	4-5 Endo mode	
ET20 / ET25 / ET25L / ETBD	4	4-5 Endo mode	
AS3D / AS6D	4	4-5 Endo mode	
AS9D	3	3-4 Endo mode	
ASLD / ASRD	4	4-5 Endo mode	

drop-by-drop   medium spray   high spray   no irrigation
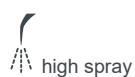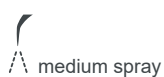
APPLICATIONS AND RECOMMENDATIONS FOR USE

To section or perform trepanning of a tooth, water-cooled high-speed burs must be used.

The feedback function of the Cocoon® Spray and Cocoon® Hygienist LED device micromotors can be used to maintain the rotation speed even when the bur encounters a resistance (increased torque).
By comparison, a compressed air turbine rotating at 350,000 rpm has a low torque. When it is used under load (section of a tooth to separate the roots), the rotation speed drops to around 150,000 rpm.
Multiplier contra-angles cut more efficiently and generate less heat than turbines (Eikenberg SL, 2001). They have higher power and torque. However, even if the tendency is to reduce weight, even so, turbines are smaller and lighter than contra-angle systems equipped with electric motors.

Dental extractions can be performed using one of three techniques:

• Simple extraction: extraction of a single-root tooth using a manual instrument only.

• Extraction with root separation: involves root hemisection using a rotary instrument, followed by the extraction of each root as a simple extraction.

• Extraction with mucosal flap reflection and bone surgery ("surgical extraction"): this involves exposing the mucosa and the bone to gain better access to the root. A rotary instrument is used to perform the alveolar osteotomy and, in the case of a tooth with more than one root, the root separation.

However, it may be necessary to use a haemostatic dressing to stop bleeding at the extraction site.

Root separation: use of a contra-angle or a turbine, at high speed, with intermittent pressing of the fissure bur on the tooth to enable cooling and cleaning of the bur with the spray (*Fig. 1 & 2*).
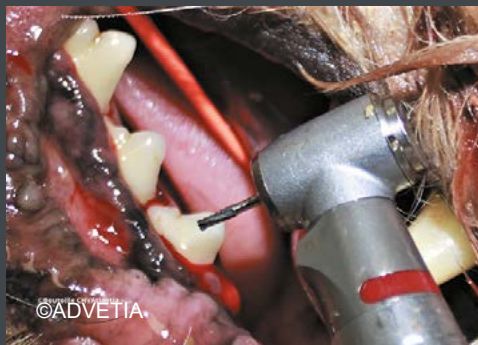
Fig. 1: Bur ready to section the tooth

Fig. 2: Sectioned tooth

TREATMENT OF TEETH WITH VITAL PULP

The exposed and contaminated pulp tissue is removed in a sterile environment using a diamond ball bur or a tungsten carbide bur that is slightly wider than the diameter of the root canal. A MTA biological dressing is placed over the pulp stump *(Fig. 3)* and the cavity is filled *(Fig. 4 to 7)*.

Fig. 3: Crown amputation & partial vital pulpectomy - Step 1

Fig. 4: Partial vital pulpectomy using sterile instruments and irrigation - Step 2

Fig. 5: Haemostasis following a partial vital pulpectomy - Step 3

Fig. 6: Application of the MTA on the amputated pulp, followed by a glass ionomer base - Step 4

Fig. 7: Material for restoration - Step 5

TREATMENT OF TEETH WITH INFECTED PULP
(dead)

THE DIFFERENT STAGES OF A ROOT CANAL TREATMENT

Fig. 8: Canine with dead pulp

• Drilling of the pulp chamber or widening of the fracture orifice using a ball or FG conical-cylindrical pear bur (diamond or tungsten carbide) *(Fig. 8)*.

Fig. 9: Identification of the entrance to the pulp chamber of a canine tooth

• Identification of the opening of the root canals in the pulp chamber using a pointed probe or a thin K-file *(Fig. 9)*. If necessary, for teeth with more than one root, the entrance to the root canal can be exposed at the floor of the pulp chamber using an ultrasonic diamond ball tip (**ETBD**).

Fig. 10: Widening of the orifice of the pulp chamber of a canine tooth with ET18D

• Widening of the coronal third of the root canal using Gates Glidden drill bits or a diamond ultrasonic extender used under constant irrigation (**ET18D**) *(Fig. 10)*.

- Canal prepared manually with K and H-files (25 or 31mm, or 60mm for canines in large dogs) *(Fig. 11)*, or with rotary instruments (25 or 31mm).

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Fig. 11: Preparation of the canal with canal files of the three roots of the maxillary carnassial tooth

- X-ray examination of the working length (*Fig. 12 & 13*).

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Fig. 12: K-file

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Fig. 13: Working length files in a tooth with three roots

- Irrigation of the root canal with 2.5% sodium hypochlorite solution and Salvizol™ E.D.T.A.

- Optional: ultrasonic cleaning of the root canal with an Irrisafe file (EndoVet).

- Drying of the canal with paper cones (*Fig. 14*).

- Testing of a primary Gutta Percha cone

- Preparation of the sealing cement for Gutta Percha cones (Sealite™ Regular)

- Coat the canal walls with endodontic cement (Sealite™ Regular)

- X-ray examination

©ADVETIA

Fig. 14: Drying of the pulp canals of a maxillary carnassial tooth with paper cones

- Insertion of the primary Gutta Percha cone then additional Gutta Percha cones (*Fig. 15*)

Fig. 15: Canine tooth with dead pulp

- Addition of other cones after cold lateral condensation of the Gutta Percha with lateral condensation or ultrasonic condensation pluggers (ET25L, ET40 and EndoVet) (*Fig. 16*)

Fig. 16: Condensation of Gutta Percha cones with a ET25L and ET40 condenser, depending on the size of the tooth, with the exception of the canine teeth.

- X-ray examination of the complete and dense canal filling (*Fig. 17*)
- Cold vertical condensation of the Gutta Percha with vertical condensation pluggers, or ultrasonic compaction with ultrasonic pluggers (EndoVet)

Fig. 17: Final filling with the Gutta Percha

CROWN RECONSTRUCTION

Restorative dentistry aims to treat surface defects and loss of dental substance causing the partial or total destruction of the tooth's crown. This can be due to a development problem, carious lesions or resorption, to a dental trauma (fracture), or to an iatrogenic pathology associated with a root canal treatment (*Fig. 18 & 19*).

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Fig. 18: Maxillary incisor enamel hypoplasia

©ADVETIA

Fig. 19: Appearance of the incisor after dental composite restoration

In veterinary dentistry, the dental restoration is essentially restricted to the filling of the access to the cavity in the case of a carious lesion or a fracture. However, if a certain portion of the tooth crown was damaged, the crown section can be reconstructed with a prosthesis (metal or ceramic crown).

Modern restorative dentistry mainly uses organic-mineral materials (composite resins), the same color as the tooth, which are bonded to the dentin and to the enamel using an adhesive. The adhesion of new adhesives enables preparation to preserve the cavity.

For a tooth with vital pulp tissue

- When the pulp is not exposed, the application of an adhesive provides sufficient insulation.
- When the pulp is almost exposed, the insertion of a calcium hydroxide cavity liner may be recommended: indirect pulp capping (Cav-Hycal).
- When the pulp is exposed, direct pulp capping can be carried out using a calcium hydroxide (HYCAL) or MTA dressing (*Fig. 20, 21 & 22*).

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Fig. 20: Caries on the occlusal face of the maxillary first molar

©ADVETIA

Fig. 21: Trimming of the carious lesion near the dental pulp

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Fig. 22: Insertion of a calcium hydroxide cavity liner (indirect pulp capping)

For a dead tooth after a root canal treatment

• Excess filler material (Gutta Percha and cement) must be removed from the pulp chamber. This can be done effectively and in a way that causes no damage using an ultrasonic diamond instrument EX1 (*Fig. 23*) or ETBD (*Fig. 24*).

Fig. 23: Cleaning of the pulp chamber with EX1

Fig. 24: Cleaning of a narrower pulp chamber, in a cat, with ETBD

• A glass-ionomer base is placed on the root canal filling material to create a perfect insulation before a composite restoration is bonded in place, and to help the composite adhere.

• The cavity is shaped and cleaned using an air polisher (AirMax®) (*Fig. 25*) and or EX1 ultrasonic instruments (*Fig. 26*). Due to the bonding capacities of composite resins, through the use of an adhesive, the cavity or lesion requires minimal preparation.

Fig. 25: Cleaning of a cavity with an air polisher (AirMax®)

Fig. 26: Trimming of a lesion with a diamond ball tip fitted on the EX1

• When the root canal treatment is carried out in two stages, the cavity is temporarily filled with a temporary filling cement such as Cimavit™ or Cimavit™ Photo until the second stage of the procedure.

Filling with a composite dental resin

- As the adhesive strength of dentin is lower than that of enamel, when the cavity is completely impacted in the dentin, a retention groove is made in the bottom of the cavity to improve retention. This preservative process can be easily carried out using an ultrasonic diamond ball tip (ETBD).

- If there is enamel around the edge of the cavity, the rim of the enamel is etched using an acid etching gel applied to the enamel surfaces for 15 seconds (*Fig. 27*).

- The PR ETCH™ etching gel is rinsed with water using the air/water syringe fitted with a Riskontrol® tip.

- For most etch-and-rinse type adhesives, it is important to moderately dry the surface of the prepared tooth ("wet bonding" technique) using an air/water syringe fitted with a Riskontrol® tip (refer to the manufacturer's instructions).

- Apply the adhesion promoter to the dentin (PR Bond™). Some products, associating etching and priming without requiring rinsing between the two, enable a two-stage procedure (self-etching adhesive), or a single-stage procedure (etching, priming and bonding) to be carried out.

- Photopolymerization with a curing light (MiniLED™ Active).

- Surface filling with a photopolymerizable dental composite (*Fig. 28*).

Fig. 27: Acid etching of the enamel and the dentin ("total etch" technique using PR Etch™)

Fig. 28: Application of the composite resin on the tooth prepared with PR Bond™

- The composite is inserted into the cavity in 2-3mm-thick layers (*Fig. 29*), then polymerized after each layer using a curing light (MiniLED™ Active) (*Fig. 30*).

Fig. 29: The composite is inserted in layers until the restoration is complete

Fig. 30: Dental composite polymerization

- Finishing of the composite surface and the junction with the tooth using a finishing bur, finishing stones and polishing discs (*Fig. 31*).

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Fig. 31: Polishing of the composite using an installed tip under irrigation

Crown reconstruction on a canine tooth

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Fig. 32: Canine tooth before composite restoration

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Fig. 33: Canine tooth after composite restoration

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Fig. 34: Ceramic-metallic crown - Final composite restoration before preparation of the crown for cosmetic prosthesis

©ADVETIA

Fig. 35: Ceramic-metallic crown

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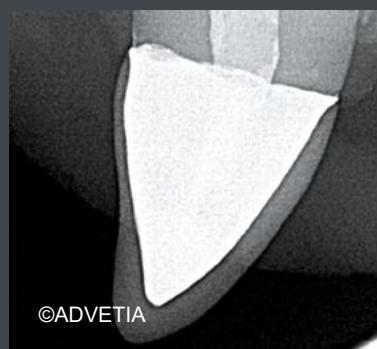
Fig. 36: Ceramic-metallic crown - X-ray of the cast cosmetic ceramic-metallic crown

APPLICATIONS AND RECOMMENDATIONS FOR USE
FILING OF A TOOTH IN RABBITS AND RODENTS

A 1:1 straight handpiece, equipped with an abrasive handpiece bur, can be used to file the teeth of rabbits and rodents suffering from malocclusion; speed: approximately 6000 rpm.
The use of an irrigation spray in these conditions is difficult (small mouth, absence of endotracheal intubation). It is therefore preferable to use a high-breaking-capacity abrasive instrument to minimize thermal stress. For the most important dental areas, a filing bur is used, whereas a polisher can be used for finishing and for less important areas.

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piezotome cube

Powerful, responsive, intuitive and minimally invasive

Simplify extraction and bone surgery

ACTEON® Piezotome® ultrasonic generators are controlled by the patented Newtron® technology. The perfectly allied advanced electronics, handpiece and tips provide unique clinical benefits for a stress-free approach to every procedure.

PRESERVATION

- Alternating between high and low amplitude
- Preservation of soft tissues for improved tissue healing and improved cellular regeneration.

Amplitude   Piezotome® modulation mode

Time 1 second
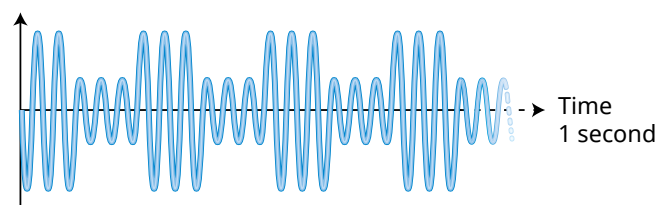
EFFICIENCY

- Automatic adjustment of the frequency from 28 to 36kHz depending on the tip shape and weight.
- Optimal performance for each procedure.

MULTIPURPOSE

The Piezotome® Cube at your disposal for your different surgical procedures:
- dental
- orthopaedic
- laminectomy

- Dimensions (LxDxH): 251x271x160mm
- Weight: 3.5kg
- Frequency: 28-36kHz

Easy to use

Peristaltic pump
- Rapid and intuitive insertion of the irrigation line into the pump
- Compact and robust
- Fine adjustment (ml/min) and smooth flow reaching the end of the tip on the soft tissues

External irrigation line
- Extended handpiece service life
- Immediate visual inspection throughout the procedure
- Ensures a completely sterile procedure and facilitates maintenance
- Autoclavable or sterile for single-use

Easily sterilizable

- Easy maintenance
- Direct access to all parts
- Compliance with hygiene regulations
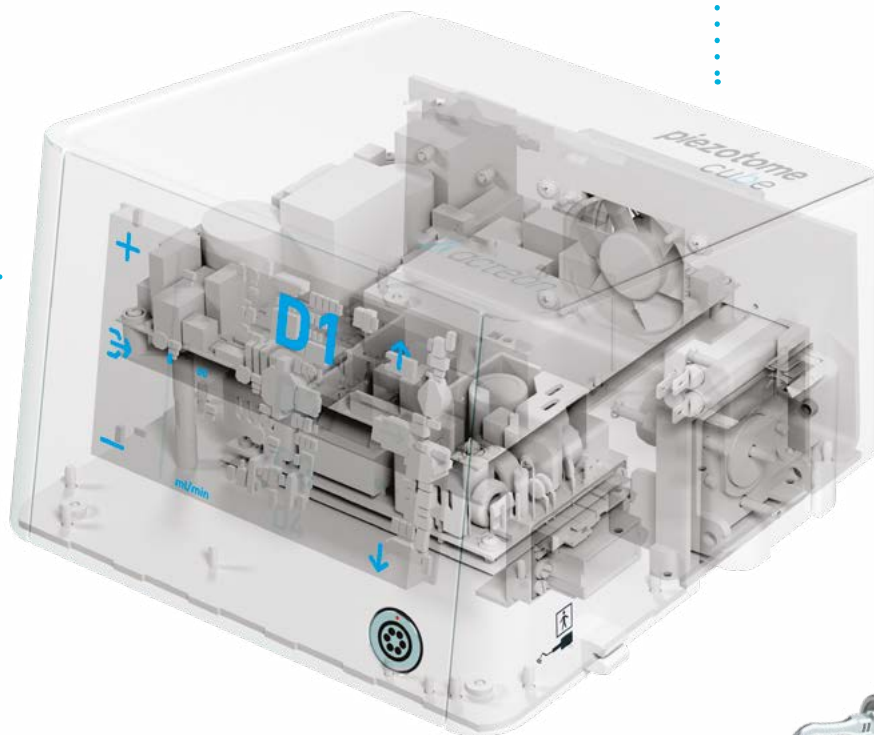
Naturally intuitive

Dynamic Power System Inside
Power intuitively adapted to ensure maximum efficiency and safety

Depending on resistance encountered, the smart assistance D.P.S.I. will:
- Increase the power by +30%, to improve cutting performance
- Reduce the power by -10%, to increase safety on soft tissues

Cube LED handpiece

- Improved design based on 6 ACTEON® ceramic rings, more power than ever before
- Lighter with a perfectly balanced design to enable natural movement without rotation, to reduce hand fatigue
- Fully white LED ring (100,000 Lux) to allow optimum distinction of tissues and visibility of posterior areas
- Compatible with a wide range of tips enabling a multitude of clinical uses

PIEZOTOME® CUBE

Comes with a CUBE LED handpiece, a handpiece holder, an essential kit (6 tips): BS1S, BS4, SL1, SL2, SL3 and LC2), a torque wrench, a bracket, 2 autoclavable irrigation lines, 5 clips and 15 perforators

F50100

PIEZOTOME® CUBE ACCESSORIES

	PIEZOTOME® CUBE LED HANDPIECE	*F12816*
	MULTIFUNCTION FOOTSWITCH	*F50109*
	HANDPIECE HOLDER	*F50133*
	IRRIGATION LINE CLIPS x 10	*F50116*
	BRACKET	*F50129*
	LED RING	*F12828*
	AUTOCLAVABLE PIEZOTOME® TORQUE WRENCH	*F50150*
	SINGLE-USE STERILE UNIVERSAL IRRIGATION LINE x 10 with flow control system	*F59905*
	AUTOCLAVABLE IRRIGATION LINE x 1 + 10 sterile perforators	*F57374*
	AUTOCLAVABLE IRRIGATION LINE x 1	*E59920*
	DISPOSABLE STERILE PERFORATORS x 10	*F57372*
	TROLLEY Air, water, electricity connections 3 glass plates: 60x50cm Dimensions (LxDxH): 66x54x79cm	*F27125*

implant
center 2

Combined technologies for safe and quick bone surgery

VERSATILE & SOPHISTICATED

The alliance of highly sophisticated rotary and ultrasonic technologies, guaranteeing complete independence in a growing number of varied clinical fields. ImplantCenter™ 2 is the perfect multipurpose device for:
- ultrasonic bone surgery (ultrasonic piezosurgery)
- implantology with use of a micromotor and a sterile irrigation surgical contra-angle
- conventional ultrasonic treatments (scaling, debridement, endodontics and restorative dentistry)

3 AVAILABLE MODES

I-Surge™
Implantology motor

Piezotome®
Pre-implant surgery

Newtron®
Conventional treatments

- Dimensions (LxDxH): 473x340x150mm
- Weight: 5kg
- Frequency: 28-36kHz
- Motor speed: 100 to 40,000 rpm

IMPLANTCENTER™ 2

Comes with a LED motor, a LED motor cord,
a progressive footswitch, 2 brackets, 2 handpiece
holders, 2 autoclavable irrigation lines and 30 perforators

F27200

IMPLANTCENTER™ 2 ACCESSORIES

PIEZOTOME® LED HANDPIECE + CORD		*F12815*
NEWTRON® CORD		*F12850*
LIGHT RING		*F12821*
NEWTRON®LED HANDPIECE		*F12609*
NEWTRON® LED CORD		*F12830*
BRACKET		*F27113*
PIEZOTOME® 2 PACK (no tip) Comes with a Piezotome® LED handpiece + CORD, a sterilization box and a Piezotome® torque wrench		*F87523*
STERILIZATION BOX		*F27156*
IRRIGATION LINE CLIP		*E57353*
IMPLANTCENTER™ 2 PROGRESSIVE FOOTSWITCH		*F27170*
HANDPIECE OR MOTOR HOLDER		*F02463*

	AUTOCLAVABLE PIEZOTOME® TORQUE WRENCH	*F50150*
	SINGLE-USE STERILE UNIVERSAL IRRIGATION LINE x 10 with flow control system	*F59905*
	AUTOCLAVABLE IRRIGATION LINE x 1 + 10 sterile perforators	*F57374*
	AUTOCLAVABLE IRRIGATION LINE x 1	*E59920*
	DISPOSABLE STERILE PERFORATORS x 10	*F57372*
	TROLLEY Air, water, electricity connections 3 glass plates: 60x50cm Dimensions (LxDxH): 66x54x79cm	*F27125*

ACCESSORIES FOR IMPLANTCENTER™ 2 WITH LED MOTOR

	I-SURGE™ LED LIGHT MICROMOTOR	*F27210*
	DISCONNECTABLE MICROMOTOR CORD **I-SURGE™ LED**	*F27211*
	20/1 BIEN-AIR* LED CONTRA-ANGLE green ring	*F36132*

ACCESSORIES FOR IMPLANTCENTER™ 2 WITH NON-LED MOTOR

	I-SURGE™ MICROMOTOR	*F27123*
	I-SURGE™ DISCONNECTABLE MICROMOTOR CORD	*F27124*
	I-SURGE™ MICROMOTOR CORD **+ DISCONNECTABLE MICROMOTOR CORD**	*F34450*
	MONT BLANC 20:1 ANTHOGYR* CONTRA-ANGLE Green ring (non LED)	*F36140*
	SPRAY CLIP • For Mont Blanc Anthogyr* contra-angle	*F36141*

Surgical tips

Cutting-edge piezo technology down to the handpiece tip

ROBUST TIPS

- A wide series of innovative tips designed for different anatomic contexts: more than 50 treatment tips to ensure clinical versatility
- Exclusive designs, alloys and coatings for enhanced preservation and efficiency
- Longer service life
- Excellent resistance to sterilization cycles

CUTTING-EDGE TECHNOLOGY

- Fine and precise cutting
- Cutting selectivity
- Smooth and effortless cutting
- Easy bone access

ACTEON®
Original
TIPS

Bone Surgery

Bone surgery kit* *F87509*

Osteotomy - osteoplasty

BS1S "Slim"
F87525
Depth of cut 9mm

BS2L
F87502
Left curvature

BS2R
F87503
Right curvature

BS6
F87506

BS4
F87504

BS5
F87505

Essential

Essential kit* *F87528*

The most popular bone surgery tips

BS1S "Slim"
F87525
Depth of cut 9mm

SL1
F87511

LC2
F87542

BS4
F87504

SL3
F87513

SL2
F87512

Universal

Universal kit* *F87539*

The 6 main tips for extractions, crest expansions and piezocision

BS6
F87506

LC1
F87507

LC2
F87542

CE1
F87551

CE3
F87553

PZ1
F87571

ACTEON® Original TIPS

Extraction

| Extraction kit* | F87546 |

Extraction of wisdom teeth, fractured teeth, sectioned roots

LC1
F87507

LC2 (x2)
F87542

LC2L
F87543

LC2R
F87544

NINJA®
F87545

Intralift

| Intralift kit* | F87536 |

Oral sinus lift

TKW1
F87531
Ø1.35mm tapered tip (pilot drilling)

TKW2
F87532
Ø2.1mm cylindrical tip (preliminary drilling)

TKW3
F87533
Ø2.35mm cylindrical tip (preliminary drilling)

TKW4
F87534
Ø2.8mm cylindrical tip (secondary drilling)

TKW5
F87535
Non-cutting Ø3mm "trumpet" tip (separation of the sinus membrane)

Sinus Lift

| Sinus lift kit* | F87519 |

Sinus lift

SL1
F87511

SL2
F87512

SL3
F87513

SL4
F87514

SL5
F87515

Crown Extension

Crown extension

CE1
F87551
Ø1.75mm diamond ball tip

CE2
F87552
Ø1.20mm diamond ball tip

CE3
F87553
Diamond straight tip over 5mm

BS6
F87506

*Comes with an autoclavable metal holder and a universal wrench

Crest Splitting

| Crest Splitting kit* | F87567 |

Crest splitting

CS1
F87561

CS2
F87562

CS3
F87563

CS4
F87564

CS5
F87565

CS6
F87566

Piezocision™

Orthodontic surgery

PZ1
F87571
Anterior corticotomies

PZ3
F87574
Anterior corticotomies of root spaces that are very close together

TPLO

Tibial plateau trimming osteotomy

BS1S
F87525

BS1L
F87527

BS2L
F87502

BS2R
F87503

BS2L XL
F87605

BS2R XL
F87606

BS6
F87506

BS6 XXL
F87604

ACTEON®
Original
TIPS

Other tips

RHS1 *F87688*	**RHS2Hb** *F87686*	**RHS2Fb** *F87687*	**RHS3L** *F87677*	**RHS3R** *F87678*
RHS4L *F87683*	**RHS4R** *F87682*	**RHS5** *F87679*	**RHS6** *F87680*	**BS1RD** *F87557* *Round saw, 280°* *of active surface*	**LC1 XL** *F87607*

PACKS & ACCESSOIRES

BONE SURGERY PACK
Comes with a sterilization box, a Piezotome® handpiece and its autoclavable cord, a Bone Surgery kit and an autoclavable Piezotome® torque wrench   *F87500*

EXTRACTION PACK
Comes with a sterilization box, a Piezotome® handpiece and its autoclavable cord, an Extraction kit and an autoclavable Piezotome® torque wrench   *F87540*

ESSENTIAL PACK
Comes with a sterilization box, a Piezotome® handpiece and its autoclavable cord, an Essential kit and an autoclavable Piezotome® torque wrench   *F87529*

METAL HOLDER   *F88445*

TIP SETTINGS

	piezotome cube / implant center 2	implant center 2	IRRIGATION ml/mn
	MAIN SETTING	FINE SETTING	
BS1S / BS1L / BS1RD / BS2L / BS2R / BS6	D1	1-3	60
BS5	D3	1-3	60
CS1 / CS2 / CS3 / CS4 / CS5 / CS6 Mandible	D2	1-3	80-100
CS1 / CS2 / CS3 / CS4 / CS5 / CS6 Maxilla	D3	1-3	80-100
SL1 / SL2	D1	1-3	60
SL3	D4	1-3	50
SL4 / SL5	D4	1-3	30
TKW1 / TKW2 / TKW3 / TKW4	D2	3	100
TKW5	D3	1	30-40
PZ1 / PZ3	D1	1-3	60
LC1 / LC2 / LC2L / LC2R / NINJA	D1	1-3	60-80
CE1 / CE3	D1	1-3	60-80
CE2	D2	1-3	60-80
BS2LXL / BS2RXL	D1	1	80
BS6XXL	D1	3	80

MAXILLO-FACIAL SURGERY

In veterinary medicine, maxillo-facial bone surgery is mostly performed in the fields of oncology (maxillectomy and mandibulectomy), traumatology (osteosynthesis, bone graft harvesting), and corrective surgery (condylectomy, corrective osteotomy). Different instruments are used to cut the bones: manual osteotome, bone cutter or oscillating saw.

Piezoelectric bone surgery, or piezosurgery, is an innovative technique that relies on the very high frequency vibration of a metal tip to cut the bone. The tip works without assistance and a simple light-to-moderate pressure on the bone is all that is required. This, along with direct sterile irrigation of the operating site, minimizes thermal stress on the bone (*Fig. 37*).

Fig. 37: Caudal maxillectomy with ImplantCenter™ 2

This technique enables selective cutting due to the selection of frequencies ranging from 28 to 36kHz. The tips are only active on hard tissues, which reduces risks of soft tissue lesions.

Unless they are completely impacted in the bone, the soft tissues vibrate at the same frequency as the tip. This therefore allows an osteotomy to be performed without risk of damage to the neurovascular pedicles (Labanca et al., 2008). Curvilinear bone incisions of any shape can also easily be made with a stylus (*Fig. 38 & 39*). In cranial surgery, it is therefore possible to perform an osteotomy of the parietal bone without damaging the dura mater (Kotrikova et al., 2006).

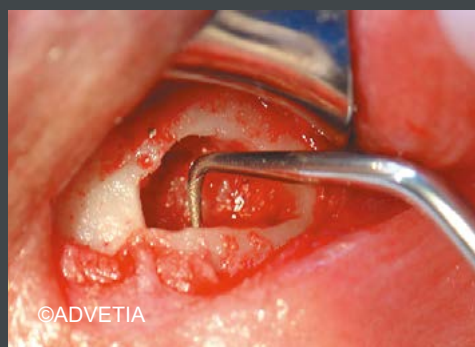Fig. 38: Maxillectomy - Orbitectomy with ImplantCenter™ 2

Fig. 39: Apical resection - Intraoral approach of a canine tooth - Preparation of retrograde cavity with ultrasonic tip

In veterinary surgery, piezosurgery is indicated in a number of cases: mouth surgery (complex dental extractions, removal of root debris, apical surgery, bone curettage, periodontal surgery), maxillo-facial surgery (maxillary and mandibular resections, preparation of fractural ends, bone graft harvesting, TMJ surgery), nasal surgery (rhinotomy, sinusotomy), middle ear surgery (trepanning and curettage), osteoarticular surgery and spinal and central neurosurgery (*Fig. 40-41-42-43-44-45*). A complete revision of piezosurgery applications in the veterinary domain has recently been published (Hennet, Frontiers in Veterinary Science, 2015).

Fig. 40: Apical resection - Ventral approach of a canine 1 tooth - Trepanning with ImplantCenter™ 2

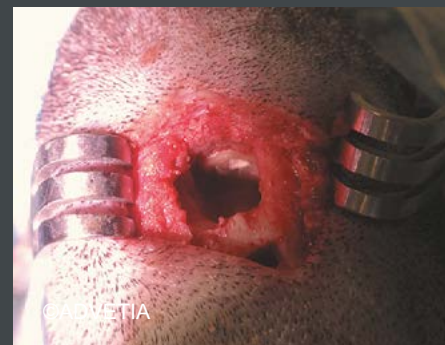Fig. 41: Apical resection - Ventral approach of a canine 2 tooth - Exposure of the apex

Fig. 42: Apical resection - Ventral approach of a canine 3 tooth

Fig. 43: Caudal osteotomy of the mandible with ImplantCenter™ 2

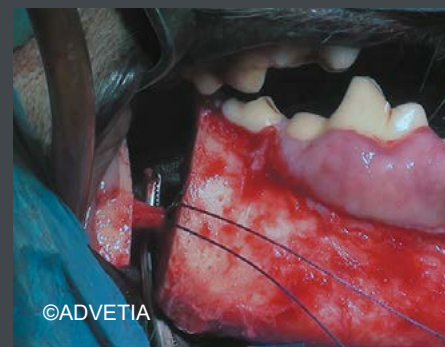Fig. 44: Caudal osteotomy of the mandible with ImplantCenter™ 2 - Deep cut

Fig. 45: Caudal osteotomy of the mandible with ImplantCenter™ 2 - Preservation of the alveolar neurovascular bundle

In comparison with other bone cutting instruments (manual osteotome, bone cutter, oscillating saw), the main advantages of piezoelectric bone surgery are:
• Selective cutting of mineralised tissues
• Substantial reduction in soft tissue lesions
• Less bleeding (effect of cavitation)
• Excellent visibility of the surgical field, due, in part, to minimal bleeding, the high luminosity of the LEDs, and the irrigation efficiency
• Precise cutting (limited vibration amplitude and specific design of tips-osteotomes)
• Multiple tips of varied designs adapted to all situations
• Curvilinear cutting
• No thermal stress
• Sterile irrigation - steam sterilization

The cutting action and tactile sensations are different with ultrasonic tips, compared with rotary instruments. A learning phase is required. Initially, 20 to 30% more time should be allowed for bone cutting (Landes et al., 2008).

FACTS & FIGURES

INCISIONS / HAEMOSTASIS

As the craniofacial region is highly vascularized, oral and maxillofacial surgery always causes bleeding, which can be profuse. Good haemostasis helps ensure the success of a procedure.

APPLICATIONS AND RECOMMENDATIONS FOR USE

To stem alveolar bleeding, a haemostatic sponge can be placed in the alveolus (Etick Collagene).
The electric scalpel ensures cutting as well as electrocoagulation. Due to its interchangeable electrodes, numerous interventions, even the most delicate, can be practised. The fineness of the electrodes enables effective control of bleeding and access to all areas (*Fig. 46*).

©ADVETIA
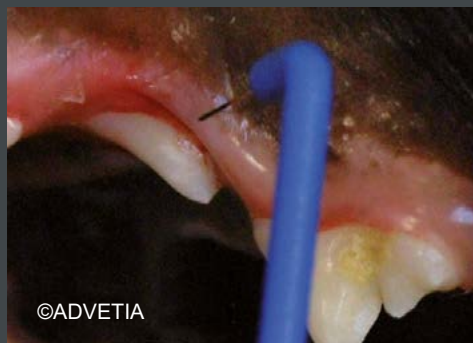
Fig. 46: Incision using an electric scalpel

servotome

Towards
a new impetus

RELIABLE AND COMPACT

- Small dimensions
- User-friendly design for ultra-fast setting up
- 2 potentiometers (incision and coagulation)
- Fine adjustment of settings depending on type of tissue encountered

30 WATTS IS SUFFICIENT FOR MORE EFFICIENCY

- Controlled power
- Reliable and reproducible adjustment
- Optimum efficiency, improved safety
- Less energy loss

CONTROLLED POWER FOR ALL ELECTROSURGICAL USE

- Incisions/Excisions
- Frenectomy
- Gingivoplasty
- Coagulation
- Abscess incision
- Exposure of impacted teeth
- Gingivectomy
- Etc.

SERVOTOME®

Comes with a simple footswitch, an electrode holder, a box of 10 electrodes and a conductive bracelet

F57210

SERVOTOME® ACCESSORIES

CONDUCTIVE BRACELET

F57226

ELECTRODE HOLDER

F00476

ELECTRODE HOLDER CORD (2m)

F00475

SERVOTOME® II FOOTSWITCH

F00059

KIT CONTAINING 10 ELECTRODES

F10440

KIT CONTAINING 10 ELECTRODES + 1 ELECTRODE HOLDER

F10472

SERVOTOME® ELECTRODES
Classified by volume and by haemostatic effect

Incision
Ø0.22mm

I 22 S
F10421

I 22 CA
F10422

Excision
Ø0.22mm

TR 22 L
F10424

TR 22 R
F10425

TR 22 T
F10427

Coagulation incision
Ø0.40mm

I 40 S
F10431

I 40 CA
F10432

Fulguration and coagulation
Ø1mm/Ø2.5mm/Ø3.2mm

FC 25 B
F10428

FC 32 B
F10429

FC 10 N
F10430

	SURGICAL APPLICATIONS
ORAL SURGERY	Gingival eviction
	Abscess incision and draining
	Exposure of impacted tooth - mucous cap removal
	Cutting of pericoronal sac
	Haemostasis
RESTORATIVE DENTISTRY	Collar extraction
	Exposure of fractured root - crown extension
	Elimination of hypertrophic gum tissue
	Widening of dental groove
	Gingival modelling of toothless crest
ORTHODONTICS	Exposure of impacted tooth
	Frenectomy
	Crown extension to fit rings
	Elimination of hypertrophic gum tissue
OPERATIVE DENTISTRY	Preparation of cavities for inlay before taking an imprint
	Frenectomy
PERIODONTICS	Flap surgery
	Gingivectomy
	Gingivoplasty
	Stripping

ELECTRODE SELECTION									
I 22 S	I 22 CA	TR 22 T	TR 22 R	TR 22 L		I 40 CA	FC 10 N	FC 25 B	FC 32 B
✔	✔								
✔	✔				✔	✔			
✔	✔								
✔	✔								
					✔	✔	✔	✔	✔
✔	✔								
✔	✔				✔	✔			
		✔	✔	✔		✔			
✔	✔				✔	✔	✔		
		✔			✔	✔			
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✔	✔				✔	✔			
✔	✔	✔	✔	✔	✔	✔		✔	
					✔	✔	✔		
✔	✔				✔	✔			
✔	✔								
✔	✔	✔	✔		✔	✔			
✔	✔	✔	✔		✔	✔			
✔	✔	✔	✔		✔	✔			

ACTEON® INSTRUMENTATION

ELEVATORS

Easy lifting of roots per periodontal ligament section and aveolodental bone root recession
Perfectly adapted for the contour of small teeth such as incisors and the roots of small premolars (*Fig. 1 & 2*).
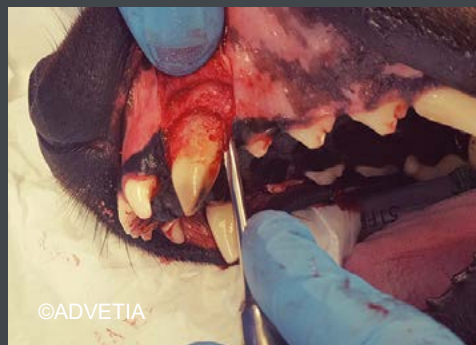
Fig. 1 & 2: Lifting of roots with a 2mm elevator

PERIOSTEAL ELEVATORS

Periosteal elevators, or Molt elevators, facilitate the creation of gingival flaps (*Fig. 3 & 4*) after separation of the gum performed with the Chompret syndesmotome.

Fig. 3 & 4: Gingival flap with a mini Molt elevator

BONE CURETTES

Instruments used to clean the alveolus and to remove granular tissues

DOUBLE PICK

Identify irregularities on the tooth's surface, the entrance to the root canal on broken teeth. Identify dental resorptions, in cats in particular.

CHOMPRET SYNDESMOTOME

Unique instrument used to easily separate the gingival attachment to create a mucogingival flap (*Fig 5*).
Prevents laceration or perforation of the mucosa.

Fig. 5: Use of the Chompret syndesmotome

POST PLIERS & FORCEPS

The anatomic handle allows greater precision and reduces user fatigue. The parallel pliers and the complete closing of the jaws ensure a better grip on all sizes of teeth, without fracturing them. Post pliers can also be used to extract teeth from rodents. The jaws are atraumatic.
The forceps have a pincer that is parallel when fully closed for improved handling. They are designed for use on all teeth (*Fig. 6*).

Fig. 6: Easy grip of small teeth such as a cat's teeth during extraction

PV1 CURETTE

Identify irregularities on the tooth's surface, the entrance to the root canal on broken teeth. Identify dental resorptions, in cats in particular.

GRADUATED PERIODONTAL PROBE

Its marking every 1mm with a black line every 5mm facilitates reading (*Fig. 7*)

Fig. 7: Use of the graduated periodontal probe
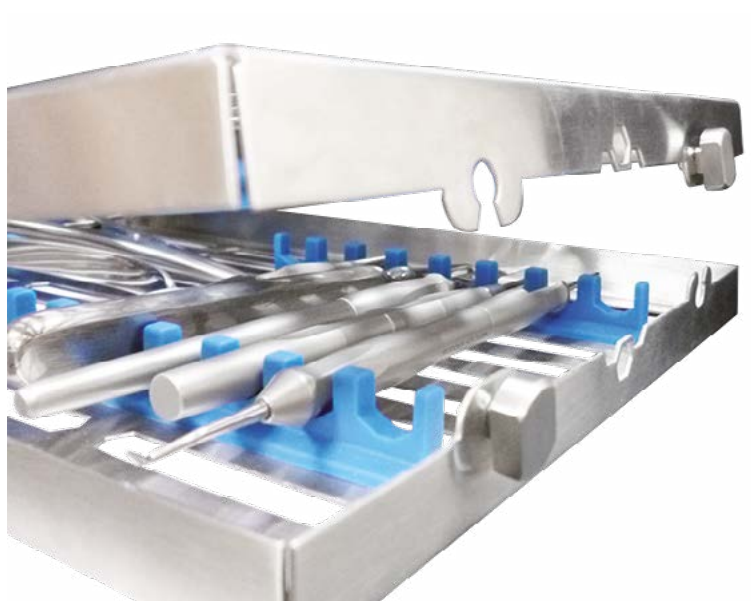
Instruments kit

> **The key instruments in a single kit**

VETERINARY INSTRUMENTS KIT
Comes with 4 elevators, 2 Molt elevators, 1 syndesmotome,
1 pair of pliers, 2 forceps, 2 curettes, 1 graduated probe,
1 double pick, 1 PV1 curette (cassette not included)

156.VT

KIT CONTENTS

Elevators

CAMBRAY ELEVATOR, FRONT 2mm		*156.AV*
CAMBRAY ELEVATOR, BACK 2mm		*156.AR*
ELEVATOR NO. 50 2,5mm		*156.50*
BEIN ELEVATOR NO.66 3mm		*156.66*

Syndesmotome

| | CHOMPRET SYNDESMOTOME - SICKLE BLADE NO. 3 | *264.03* |

Curettes and probes

	HEMINGWAY CURETTE NO. 1	*135.01D*
	DARBY CURETTE	*162.07D*
	PV1 SUBGINGIVAL CURETTE	*403.01XL*
	GRADUATED PERIODONTAL PROBE 15mm	*418.05D*
	DOUBLE PROBE NO.5	*263.05D*

Pliers and forceps

	POST PLIERS	*751.00*
	FORCEPS FOR CANINES AND LOWER PREMOLARS	*290.13*
	FORCEPS FOR CATS & SMALL DOGS	*297.29*

Other instruments

| | MOLT ELEVATOR NO.7 | *407.07D* |
| | MOLT ELEVATOR NO. 9 | *407.09D* |

Curettes and probes

	PV1 SUBGINGIVAL CURETTE	*403.01XL*

SIMPLE PROBES WITH DESIGN HANDLE

	SIMPLE PROBE NO. 6	*262.06D*
	SIMPLE PROBE NO. 9	*262.09D*
	SIMPLE PROBE NO. 20	*262.20D*
	SIMPLE PROBE NO. 23	*262.23D*
	RHEIN SIMPLE PROBE NO. 3	*266.03D*

DOUBLE PROBES WITH DESIGN HANDLE

	DARBY CURETTE	*162.07D*
	DOUBLE PROBE NO.5	*263.05D*
	DOUBLE PROBE NO.7	*263.07D*

GRADUATED PROBE WITH DESIGN HANDLE

	GRADUATED PERIODONTAL PROBE 15mm	*418.05D*

HEMINGWAY CURETTE WITH DESIGN HANDLE

	HEMINGWAY CURETTE NO. 1	*135.01D*

Pluggers and syndesmotomes

AMALGAM PLUGGERS DESIGN HANDLE

	WESCOTT NO. 22	*201.22D*
	F.O.C SERRATED	*173.01D*
	F.O.C SMOOTH	*173.04D*

CHOMPRET SYNDESMOTOMES

	STRAIGHT BLADE NO. 1	*264.01*
	SICKLE BLADE NO. 3	*264.03*

Pliers and forceps

FORCEPS

FORCEPS FOR CATS & SMALL DOGS *297.29*

CANINES AND LOWER PREMOLARS *290.13*

UPPER ROOTS EXTRA FINE JAWS *291.60*

SYNDESMOTOME SHAPE (BOTTOM) *290.23*

SYNDESMOTOME SHAPE (TOP) *290.24*

SYNDESMOTOME SHAPE (BOTTOM) *290.25*

CHISEL PLIERS

LUER-FRIEDMANN CHISEL PLIERS
fine jaws - 13mm *591.00*

POST PLIERS

CURVED
14cm *751.00*

Tweezers

TWEEZERS

	PERRY TWEEZERS NO.2 13cm - serrated jaws	**222.02**
	PERRY TWEEZERS NO.3 13cm - serrated jaws	**222.03**

TISSUE TWEEZERS

	STRAIGHT WITH PINCERS 14cm	**222.07**
	STRAIGHT WITH SERRATED JAWS 14cm	**222.06**
	STRAIGHT WITH SERRATED JAWS 18cm	**222.09**

ADSON TISSUE TWEEZERS

	TWEEZERS 12.5cm	**222.10**
	TWEEZERS 12cm	**222.11**
	ATRAUMATIC TWEEZERS 12.5cm	**222.12**

Elevators

STANDARD HANDLE ELEVATORS

	Standard handle - 2.5mm	156.50
	Standard handle - 2.5mm	156.51
	Standard handle - 3mm	156.52
	Standard handle - 5mm	156.53
	Standard handle - 4mm	156.55
	Standard handle - 5mm	156.57
	Standard handle - 3mm	156.60
	Standard handle - 3.5mm	156.61
	Standard handle - 3mm	156.63
	Standard handle - 3mm	156.66
	Standard handle - 2mm	156.76

CAMBRAY ELEVATORS

	CAMBRAY ELEVATOR, FRONT 2mm	*156.AV*
	CAMBRAY ELEVATOR, BACK 2mm	*156.AR*

COUPLAND ELEVATORS

	Standard handle - 3mm	*156.84*
	Standard handle	*156.86*

VIGNAL ELEVATORS

	Standard handle - 3mm	*149.19*
	Standard handle - 4mm	*149.20*
	Standard handle - 5mm	*149.21*
	Standard handle - 2.5mm	*149.24*

LUXATOR ELEVATORS

	ANGLED 3mm	*159.3C*
	STRAIGHT 3mm	*159.3D*
	ANGLED 5mm	*159.5C*
	STRAIGHT 5mm	*159.5D*
	STRAIGHT	*159.79*

Scissors

GOLDMAN-FOX SCISSORS

	THIN AND POINTED STRAIGHT SCISSORS 10.5cm	*621.00*
	THIN AND POINTED ANGLED SCISSORS 10.5cm	*622.00*
	MICRO STRAIGHT SCISSORS 9cm	*623.00*
	POINTED STRAIGHT SCISSORS 11cm	*625.00*

METZENBAUM SCISSORS

	ANGLED SCISSORS 14cm	*652.00*

Other instruments

MINI-ELEVATORS

	MOLT ELEVATOR NO.7	*407.07D*
	MOLT ELEVATOR NO. 9	*407.09D*

DOUBLE CEMENT SPATULA DESIGN HANDLE

	NO.1	*252.01D*

SCALPELS

	STANDARD HANDLE	*601.03*
	STERILE BLADES NO.11 x100	*615.11*
	STERILE BLADES NO.15 x100	*615.15*

RETRACTORS

	FARABEUF RETRACTORS 12cm x2	*151.00*

NEEDLE HOLDERS

	MATHIEU 14cm	*743.00*
	CASTROVIEJO 15cm	*747.01TC*

Accessories

STERILIZATION CASSETTES

EASYCLIP CASSETTE
8 instruments - 180x136x30mm

233.30

SURGICAL CASSETTE
285x92x37mm + 2 clips for scissors and needle holder

233.20

STAINLESS STEEL CASSETTE WITH GREEN SILICONE
8 slots - 180x130x25mm

233.13

STAINLESS STEEL CASSETTE WITH YELLOW SILICONE
10 slots - 180x130x25mm

233.14

ALUMINIUM BOX
Empty - 75x175x30mm

242.00

STAINLESS STEEL TRAYS

TRAY
20x10cm
Customizable for orders of 20+ trays

233.10

TRAY
20x15cm
Customizable for orders of 20+ trays

233.15

ACTEON® PHARMA

NON-INVASIVE TOOTH-SUPPORTED FIXATION DEVICES

Most jaw fractures can be treated using non-invasive techniques, particularly in small dogs and cats (Hennet, 1998). These techniques protect the fracture site and the teeth while ensuring a rapid bone consolidation. The teeth are used as anchorage points to stabilize the fracture. This is possible for maxillary and mandibular teeth, or teeth in the same dental arch.

Maxillo-mandibular fixation
Caudal lesions (at the frontal process or the temporomandibular joint) can, in particular in cats, be treated using this technique. By keeping the mouth half-open, with a semi-occlusion, the maxillary and mandibular canines are attached to each other using a dental composite resin, in compliance with restorative dentistry techniques.

WRICS*
This is a reference technique for all fractures located between the canine tooth and the carnassial tooth (maxillary fourth premolar or mandibular first molar). After the installation of a wire interdental reinforcement, the splint is made using acrylic/non-exothermic composite resin (Coolsin™ Plus). The wire interdental reinforcement accentuates the retention and can improve the mechanical properties of the splint (Kern et al., 1993).

These techniques cannot be used to treat mandibular angle fractures, complex caudal fractures and mandibular body fractures in the absence of solid dental abutments (carnassial and canine) to make a splint. These cases require an internal plate and screw type fixation.

Wire-reinforced interdental composite splint

THE DIFFERENT STEPS INVOLVED IN THE MAKING OF AN INTERDENTAL SPLINT

- Intubate the animal by pharyngostomy
- Accurately assess the fracture site (dental X-ray - *Fig. 1*)
- Suture the soft tissues
- Scale and polish the teeth
- Reduce the fracture by re-establishing the initial occlusion
- Place an interdental metal ligature between the carnassial tooth and the canine tooth without compression (neutral position - *Fig. 2*)

©ADVETIA

Fig. 1: Dental X-ray

©ADVETIA

Fig. 2: Neutral position

- Etch the teeth
- Rinse and dry using the Riskontrol® syringe
- Prepare the composite resin
- Apply the resin to the etched teeth and the metal ligature, whilst maintaining the reduction (*Fig. 3*)
- Close the oral cavity to occlusal contact
- Wait for the resin to set (self-polymerization). Keep the oral cavity closed and wait for the resin to set (±2 mins)
- Remove any excess resin, and polish

©ADVETIA

Fig. 3:

coolsin plus

Self-polymerizing resin to form temporary crowns and bridges, and splints

PROPERTIES

- Aesthetic and natural colors
- Compressive strength > 110 Mpa
- Self-polymerizing material
- Quick setting time
- Optimum finish and polishing

WORK SEQUENCES

- 0 minutes: Application in the impression
- 0-45 seconds: Intraoral insertion of the impression
- 2-3 minutes: Removal from the patient's mouth
- 6 minutes: Removal of oxygen inhibition layer using a solvent
- 6-7 minutes: Preparation, modelling and polishing

COOLSIN™ PLUS
1 x 50ml dual-cartridge, 10 single-use mixing tips

201070

COOLSIN™ PLUS TIPS x 100

200 073

COMPATIBLE WITH THE KITESURF™ APPLICATOR

KITE SURF™ APPLICATOR

281 532

orthofast

Alginate-base material

INDICATIONS

Dental impressions

COMPOSITION

Alginate salts, mineral filler, food colorings

PROPERTIES

- Quick setting time: 1 min 40 secs to 2 mins
- Orange color

ORTHOFAST™ 2 x 500g bags, powder and water dosing system	*263 621*
ORTHOFAST™ ECO 12 x 500g bags, powder and water dosing system	*263 622*
ORTHOFAST™ CLINIC 24 x 500g bags, powder and water dosing system	*263 623*

cav-hycal

Light-curing, radiopaque material containing calcium hydroxide

INDICATIONS

Indirect pulp capping
Cavity liner

PROPERTIES

- One-component material
- Radiopaque
- High compressive and tensile strength

CAV-HYCAL™ 2 x 4g syringes, 20 disposable tips	*213 876*

kite surf putty soft

Addition silicone for precision impressions

INDICATIONS

Dual mixture impression (1 step), wash technique impression (2 steps) or triple viscosity impression

COMPOSITION

Polyvinyl siloxane, silica, excipients

PROPERTIES

- Hydrocompatible
- High viscosity
- Time management (snap-set effect)
- Bright, contrasting colors

KITE SURF™ SOFT PUTTY Normal Setting
1 x 300ml pot of base, 1 x 300ml pot of catalyst, 2 spoons

281 100

---

kite surf basic light

Addition silicone for precision impressions

INDICATIONS

Dual mixture impression (1 step), wash technique impression (2 steps) or triple viscosity impression

COMPOSITION

Polyvinyl siloxane, silica, catalyst, excipients

PROPERTIES

- Highly hydrophilic
- Low viscosity, fluid consistency
- Time management (snap-set effect)
- Bright, contrasting colors

KITE SURF™ BASIC LIGHT Normal Setting
2 x 50ml cartridges (base and catalyst), 48 mixing tips

281 375

KITE SURF™ LIGHT MIXER

281537

KITE SURF™ INTRAORAL TIPS

281 538

KITE SURF™ APPLICATOR

281 532

pr scell glass ionomer

Cementation of crowns, bridges and inlays

INDICATIONS

- Powder: fluoroaluminosilicate glass, excipients
- Liquid: acrylic acid and tricarboxylic acid copolymers, excipients

PROPERTIES

- Excellent adhesion
- Long working time
- Low film thickness
- Releases fluoride
- Radiopaque

PR SCELL™ GLASS IONOMER*
15g of powder, 8ml of liquid, 1 spoon

*213 770**

pr bond

Dual-cure dentin-enamel adhesive requiring prior etching

PROPERTIES

- Light-cure dentin-enamel adhesive (black bottle) and dual-cure (self-curing) when it is mixed with the catalyst (red bottle)
- Shear strength: ~ 13Mpa
- No post-operative sensitivity due to the elimination of residual bacteria by benzalkonium chloride

PR BOND™
5ml of light-cure adhesive, 5ml of "dual" catalyst

200 948

*Until stock clearance

pr etch

Enamel and dentin etching

PROPERTIES

- Thixotropic gel (38% phosphoric acid)
- Excellent contrast (blue color)
- Fast wash-off

PR ETCH™
4 x 1.2ml (1.5g) syringes, 8 applicator tips

200 322

etik collagene

Haemostatic surgical dressing

COMPOSITION

- Native, non-denatured, lyophilized bovine collagen (mainly type I collagen): 100%. This device contains tissues of animal origin under regulation (EU) no.722/2012.
- Dimensions: Ø 10mm, height: 16mm

PROPERTIES

- Collagen is a fibrillar protein naturally present in all connective tissues.
- Lyophilized collagen in cylindrical form displays haemostatic activity due to its adhesive, liquid absorption and gelification properties.

ETIK™ COLLAGENE
25 unit-packaged sterile cylinders

281 970

Silk dental suture

Nonresorbable sutures

INDICATIONS

Used in general surgery, ENT, dental surgery and stomatology.

PROPERTIES

- Silk dental suture 3/0: Needle: length 18mm, radius of curvature 3/8th, atraumatic triangular shape. Strand: Ø dec 2, length 45cm.
- Silk dental suture 4/0: Needle: length 12mm, radius of curvature 3/8th, atraumatic triangular shape. Strand: Ø dec 1.5, length 45cm.
- Silk dental sutures are nonresorbable strands obtained by braiding varying numbers of silk strands depending on the desired diameter. They are coated with natural wax after braiding. They are black, not very elastic but very flexible. As they have almost no shape memory, they are easy to handle and improve surgical comfort considerably.

SILK DENTAL SUTURE 4/0 DEC 1.5 box of 12 pouches	*280 201*
SILK DENTAL SUTURE 3/0 DEC 2 box of 12 pouches	*280 101*

Sterile dental needles

Infiltration anaesthesia

PROPERTIES

- European thread pitch
- Plastic hub
- Silicone coated
- Triple bevel allowing several injections without risk of bending the point of the bevel and thus obstructing the lumen of the needle
- Sterile
- Complies with standard NF EN ISO 7885 "Sterile dental injection needles for single use"

RISK OF PUNCTURE

Reminder of the protocol in force: after an anaesthesia, do not put the protective cap back on the needle by hand. Place the cap on the work surface and pick it up with the needle. In all cases, used needles must be placed in the special purpose-provided receptacles to be destroyed.

STERILE DENTAL NEEDLES 16/30 box of 100 needles	*201 444*
STERILE DENTAL NEEDLES 21/30 box of 100 needles	*201 445*
STERILE DENTAL NEEDLES 35/50 box of 100 needles	*201 448*

salvizol E.D.T.A

Root canal irrigant

COMPOSITION

Edetic acid: 8g/100g in dihemipotassium salt form, quaternary ammonium salts, excipients.

PROPERTIES

• Thanks to its chelating properties, Salvizol™ E.D.T.A. dissolves the mineralizing screen, facilitating removal of the smear layer. It contains a quaternary ammonium salt to efficiently wet the dentin wall and produce a foam, which prevents apical sedimentation of debris.
• When used alternately with sodium hypochlorite (NaOCl), Salvizol™ E.D.T.A. makes it possible obtain clean dentin walls and satisfactory opening of the tubules so that the canal can then be optimally obturated.

SALVIZOL™ E.D.T.A
250ml bottle

266 115

kit irrigation

Irrigation syringe

PROPERTIES

• Box of 100 syringes with 27g (0.41mm) single-use injection needs for root canal irrigation and adding drops to the periodontal pocket.
• Sewing needle. Transparent tip: does not cause liquid overpressure even in the event of needle blockage.
• System for fitting the quick-thread needle on the syringe: needle cannot be disconnected. Sterilized with ethylene oxide (use within 5 years)

IRRIGATION KIT 27g
Box of 100 syringes

266 291

MTA caps

Endodontic repair cement

INDICATIONS

- Retrograde and orthograde filling
- Repair of perforations
- Pulp capping

PROPERTIES

- Biocompatible
- Barrier impervious to bacteria and fluids
- Radiopaque
- Easy to use
- Delivered in pre-dosed, single-use capsules

MTA CAPS
1 aluminium bag containing 2 x 0.3g capsules

251 170

MTA APPLICATOR

213 675

hycal

Ready-to-use calcium hydroxide paste

INDICATIONS

Hycal™ is a calcium hydroxide aqueous paste indicated for:
- Direct capping during opening of the pulp or a pulpotomy
- Indirect capping for treatment of deep caries
- Temporary filling of root canals

PROPERTIES

- Product ready to use
- Effective protection of the pulp
- Radiopaque

HYCAL™
1 syringe fitted with a cannula + tube cap, 2 curved application cannulas

259 314

eugenol pur

Liquid for zinc oxide based cement

COMPOSITION

Eugenol 100%

PROPERTIES

In the presence of bivalent metallic ions (Zn²⁺), eugenol forms a chelate: chemopolymerization.

EUGENOL PUR
60ml bottle

234 110

sealite regular

Powder and liquid for permanent sealing cement for root canals

PROPERTIES

- Cement that spreads completely into the canals
- Very thin film thickness
- Very low disintegration
- Easy to use: adapted working time, setting time that allows positioning of gutta cones whatever the procedure used.

COMPOSITION

- Sealite™ Regular Powder: Diiodothymol, zinc oxide, silver powder, excipients
- Sealite™ Liquid: Eugenol Excipients

SEALITE™ REGULAR KIT
25g of Sealite™ Regular Powder, 10ml of Sealite™ Liquid, 1 spoon, 1 dropper

266 264

SEALITE™ LIQUID
10ml (refill)

266 267

cimavit

Fluoride temporary filling cement

PROPERTIES

- Ready-to-use (no mixing)
- Waterproof (impermeable plastic components)
- Excellent adherence to dentin

- Immediate setting in the mouth
- Easy to remove (probe, excavator, etc.).
- Pink color for good contrast.

CIMAVIT™
6 x 28g pots

213 859

cimavit photo

Light-curing filling material for temporary restorations

INDICATIONS

All types of temporary fillings, temporary protection in inlay and onlay techniques.

PROPERTIES

- This material is ready-to-use and does not stick to instruments.
- It is condensable, does not require a particular size of cavity, creates a hermetic seal (isolates the tooth from bacterial and thermal stresses). If the temporary filling stays in the mouth for more than 2 weeks, reinforcement with a composite is recommended on occlusal or marginal surfaces.
- It has a good aesthetic translucency. Its elastic consistency means it can be removed in one block.

CIMAVIT™ PHOTO
12 x 4g syringes

213 830

desocclusol orange

Solvent for root canal filling cements (eugenate type) and gutta percha

PROPERTIES

- Facilitates root canal filling removal:
- High dissolving capacity of zinc oxide/eugenol based cement and gutta percha
- Improves instrument efficiency
- Good local tolerability

COMPOSITION

Orange essential oil

DESOCCLUSOL™ ORANGE
14ml bottle

226 022

sitsalicine

**Polishing teeth
after scaling**

PROPERTIES

Silica is a mildly abrasive powder which gives the paste its polishing properties, eliminating micro-roughness that is present after scaling, without damaging the enamel or gums.

SITSALICINE™
60g tube

277 803

APPLICATIONS AND RECOMMENDATIONS FOR USE

POLISHING WITH A CUP

Polishing is performed slowly using a rubber polishing cup smeared with polishing paste, to be used for approximately 5 seconds per tooth. The cup must be regularly replaced.
The instruments used to perform polishing slowly are reducer contra-angles or polishing contra-angles.
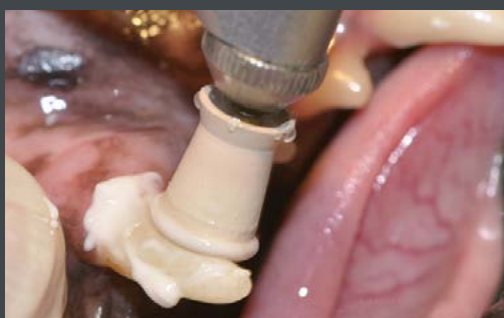
Polishing with a cup

ACTEON® ENDOSCOPY

ubipack
full HD

The compact portable endoscopy solution

AN EFFICIENT AND INTUITIVE SYSTEM FOR QUALITY DIAGNOSTICS

To immediately and easily detect a large number of pathologies, **Ubipack® Full HD** provides a high-quality image and therefore reliable information.

All of its components: **Ubicam® Full HD**, **Ubilight** and **Sopro® Imaging Veterinary** were designed based on the following guidelines:
- Performance and reliability
- Ergonomic and lightweight solution
- Means of communication between the veterinarian and animal owners, helping them to better understand and accept treatments.

This system's compact size and ease-of-use make it perfectly suited to use within the veterinary environment.

ubilight

Ublight is a compact light source that can be used alongside the Ubicam® Full HD.
Its compact size is perfectly suited to your work environment without getting in your way.
The Ubilight has just one button, which makes it simple to use and allows you to focus solely on your patient.
This product was designed to meet your essential consultation needs: No disadvantages, only benefits!

sopro imaging
veterinary

- Image and video capture
- Addition of comments
- Print, e-mail and export all data
- User-friendly and intuitive
- Multilingual software (27 languages available)
- Compatible with Windows®
- User-friendly database to store all information about the animal and their owner

ubicam
full HD

Ubicam® Full HD is a lightweight and ergonomic camera that is specially designed for diagnostic use:

- USB 3.0 connector
- Compact and easy-to-use
- 3 buttons to control white balance, take photos and videos, digital zoom and "anti-moiré" function for fiberscopes
- Compatible with any C-mount lens to obtain the perfect image size for your needs.

Short press:
Photo capture

Long press:
Zoom -

Short press:
Video capture

Long press:
Zoom +

Long press:
AWB

Double-press:
"Anti-moiré" function

UBIPACK® FULL HD

|		
	UBICAM® FULL HD	*S_191_0001*
	UBILIGHT®* with Storz® adapter	*S_281_0002*
	SOPRO® IMAGING VETERINARY	*505020*
	24mm HD 3S V1 LENS 24mm HD - C-mount lens - Optical mount with lock Weight: 90g Protection type: IPX7 (sealed) Compatible with all C-mount cameras	*S_024_0001*
	PORTABLE LIGHT SOURCE with USB charger	*200.02531.02*
	UBIPACK CASE	*010315*

*Light cable and accessories not included. Please refer to chapter Accessories page 172.

duo
full HD

The intuitive solution for endoscopy procedures

- 2-In-1 device
- 3 programmed buttons
- Compact
- LED lifetime up to 50,000 hours
- Full HD 1920x1080 pixels resolution

FOR EFFECTIVE TREATMENT

Duo Full HD combines a Full HD camera and a LED light source.
The Full HD resolution, associated with a quality light, provides precise images to ensure reliable treatment.
Its high-quality images are an excellent aid when it comes to choosing the right treatment.

MULTIDISCIPLINARY USE

Duo Full HD is perfect for diagnostic work, allying performance and simplicity during surgeries and facilitating post-operative checks.

ATTRACTIVE WITH ITS COMPACT AND MODERN DESIGN

Offering a cutting edge design and technology, the compact and elegant Duo Full HD fits well into any environment.

DUO FULL HD KIT

Delivered with a camera head, a 24mm lens, a light cable, Storz® adapters for the light source side and the endoscope side

Compatible with Sopro® Imaging Veterinary

S_K19_1000

DUO FULL HD

DUO FULL HD CONTROL CHANNEL		**S_195_9000**
DUO FULL HD CAMERA HEAD Without lens		**S_195_8000**
24mm HD 3S V1 LENS 24mm - C-mount lens - Optical mount with lock Weight: 90g - Protection type IPX7 (sealed) Compatible with all C-mount cameras		**S_024_0001**
F16-34mm LENS HD Zoom 16-34mm - C-mount lens - Optical mount Compatible with all C-mount cameras		**S_413024**

SCREENS
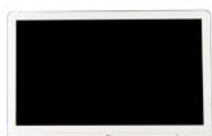
LG® FULL HD 27" SCREEN		**S_700794**
BEETRONICS FULL HD 15" SCREEN		**S_700799**
DESKTOP STAND FOR MONITOR WITH VESA MOUNTING		**700057**

Accessories

LIGHT CABLES

LIGHT CABLE Ø3.5mm, length: 3m		*S_700216*
LIGHT CABLE Ø3.5mm, length: 2,3m		*S_700215*
LIGHT CABLE Ø4.8mm, length: 3m		*S_700382*
LIGHT CABLE Ø4.8mm, length: 2,3m		*S_700384*

ADAPTERS

STORZ® ADAPTER OPTIC SIDE		*700051*
WOLF® ADAPTER LIGHT SOURCE SIDE		*700043*
ACMI/STRYKER® ADAPTER OPTIC SIDE		*700048*
STORZ® ADAPTER LIGHT SOURCE SIDE		*700044*
WOLF® ADAPTER LIGHT SOURCE SIDE		*700046*
ACMI/STRYKER® ADAPTER LIGHT SOURCE SIDE		*700047*
OLYMPUS® ADAPTER LIGHT SOURCE SIDE		*700045*
OLYMPUS® ADAPTER For Ubilight light source		*402048*

ACTEON®
HYGIENE

riskontrol

**Adopt the solution
of disposable tips
for optimal clinical protection**

REDUCES THE CROSS-CONTAMINATION RISK

- Single-use tips, easy to install
- 20 times less risk of direct or cross contamination* due to single-use design
- 2 separate air and water ducts from the syringe to the end of the tip to ensure that the air is completely dry
- Made of 100% recyclable polyethylene, no environmental impact

PROPERTIES

- Patented safe-locking system between the adapter and the tip to prevent any risk of the tip being ejected during use
- Flexible, bendable, no shape memory, can reach the most hard-to-reach places without compromising spray quality
- Prevents long, tedious and unpredictable cleaning, decontamination and sterilization procedures for your Air/Water syringes

AIR/WATER SYRINGE ADAPTER

The Riskontrol® series proposes a series of different adapters that can be fitted to around 145 types of chairs.
The adapter remains permanently in place.
Simply change the tips between each animal.
Please contact us to find out which adapter is required for your equipment.

*Source: M.Inger, V.Bennani, M.Farella, F.Bennani, RD.Cannon. Efficacy of air/water syringe tip sterilization. Australian Dental Journal 2014; 59: 87-92

classic
by **riskontrol**

	250 WHITE NON-STERILE TIPS	*201 664*
	250 BLUE NON-STERILE TIPS	*201 665*
	250 YELLOW NON-STERILE TIPS	*201 666*
	250 GREEN NON-STERILE TIPS	*201 667*
	250 PINK NON-STERILE TIPS	*201 668*

total protec
by **riskontrol**

	100 WHITE STERILE TIPS With flexible protection	*201 751*
	100 BLUE STERILE TIPS	*201 750*

sterile
by **riskontrol**

	96 INDIVIDUALLY BLISTER-PACKED STERILE TIPS Sterilized with ethylene oxide	*201 770*

septol spray

Disinfectant solution for medical devices

INDICATIONS

Rapid disinfection of previously cleaned, non-invasive and alcohol-resistant medical devices. Ready to use

PROPERTIES

- Bactericidal in 5 mins, 20°C (EN 1040, EN 13727, EN 13697
- Yeasticidal in 5 mins, 20°C (EN 1275, EN13624, EN 13697)
- Fungicidal in 15 mins, 20°C (EN 1275, EN 13624, EN 13697)
- Active against MRSA in 5 mins, 20°C (EN 13727)
- Active in accordance with EN 14476 in 1 min, 20°C, against PRV (surrogate of HBV), Herpesvirus, BVDV (surrogate of HCV) and Vaccinia virus

SEPTOL™ SPRAY*
750ml foaming spray

*268 301**

SEPTOL™ SPRAY*
5L bottle with tap

*268 300**

septol aspiration

Cleaning and disinfection of suction systems

PROPERTIES

- Bactericidal in 15 mins, 1%, 20°C (EN 13727, EN 14561)
- Yeasticidal in 15 mins, 1%, 20°C (EN 13624, EN 14562)
- Mycobactericidal in 60 mins, 1.6%, 20°C (EN 14348, EN 14563)
- Active in accordance with EN 14476 in 5 mins, 20°C, against BVDV (surrogate of HCV) at 0.50%, Herpesvirus and HIV-1 at 1% and Vaccinia virus at 2%

SEPTOL™ ASPIRATION*
5L bottle with 20cc dosing pump

*268 297**

*Until stock clearance

septol
rotative

Cleaning and disinfection of burs, rotary and canal instruments, before their sterilization

PROPERTIES

- Bactericidal in 5 mins, 20°C (EN 1040, EN 13727, EN 14561)
- Yeasticidal in 5 mins, 20°C (EN 1275, EN13624, EN 14562)
- Mycobactericidal in 60 mins, 20°C (EN 14348, EN 14563)
- Active in accordance with EN 14476 in 5 mins, 20°C, against PRV (surrogate of HBV), Herpesvirus, BVDV (surrogate of HCV), HIV-1 and Vaccinia virus

SEPTOL™ ROTATIVE*
2L bottle

*268 305**

SEPTOL™ ROTATIVE IMMERSION TANK*

*268 326**

*Until stock clearance

septol empreinte

Cleaning and disinfection of impressions

INDICATIONS

- Septol™ Empreinte is an aldehyde-free concentrated disinfectant with a wide range of action prepared and tested in compliance with new harmonized European disinfection standards.

- Septol™ Empreinte has been designed for high-level rapid disinfection of impressions made of silicone (by addition and condensation), alginate, polyether and polysulfide: the impressions remain unaltered, have no significant dimensional change and are compatible with plasters.

PROPERTIES

- Bactericidal, Yeasticidal, Mycobactericidal, virucidal with limited range of action
- Suspension test performed in accordance with standards EN 13727, EN 13624, EN 14348.
- Virucidal activity tested in accordance with standard EN 14476

SEPTOL™ EMPREINTE* 1L bottle	*268 322**
SEPTOL™ EMPREINTE IMMERSION TANK*	*268 325**

*Until stock clearance

septol
savon doux

Liquid soap - Frequent use

INDICATIONS

- Septol™ Savon Doux is perfectly suitable for repeated hand washing.
- The properties of its ingredients make it suitable for use on all types of skin.

PROPERTIES

- Washing solution, enriched with moisturizing substance, suitable for sensitive skin.
- Standard NF EN ISO 11930 criterion A: assessment of the antimicrobial protection (challenge test) against: Pseudomonas aeruginosa, Staphylococcus aureus, Escherichia coli, Candida albicans, Aspergillus niger.
- Assessment of the antimicrobial protection against: Pseudomonas aeruginosa, Staphylococcus aureus, Candida albicans, Aspergillus niger.

SEPTOL™ SAVON DOUX* 1L bottle with 4ml dosing pump	*268 507***
SEPTOL™ DOUX* 5L bottle with tap	*268 506***
SEPTOL™ DOUX* 1L bottle for wall dispenser	*268 510***
METAL WALL DISPENSER	*268 511*

*Until stock clearance

Hand towel

Ultra absorbent hand towel

PROPERTIES

- Excellent absorption, only one towel is required (6-ply cellulose)
- Strong
- Dimensions: 19x25cm
- Color: White

HAND TOWEL
Box of 1600 towels   *274 521*

WALL DISPENSER   *260 152*

INDEX

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