## **EndoPilot**



BackFill

Schlumbohm

## Concept

The EndoPilot sets new benchmarks for efficiency and safety in root canal treatment.

It combines up to 5 endodontic treatment functions – digital apex measurement, electronic EndoMotor for mechanical preparation, ultrasonic hand piece, and two obturation instruments (DownPack + BackFill) – all in one device.

This perfect solution requires very little space and only one foot switch.

All hand pieces are stored on a comfortable rack, clearly arranged and readily available. A tripod socket on the bakkside of the device offers a variety of mounting possibilities.

Work steps are quickly recallable via the large, clearly legible touch screen display. The easy to handle menu provides for intuitive utilization. It offers user-friendly information for every function in comprehensive clear text.

#### Special advantages are:

- Accurate length determination of the root canal space throughout mechanical preparation
- A fully isolated contra-angle
- File management with "box administration" and "supervision of file-wear"
- Comfortable touch display
- Modular structure

Updates for new files and functions are made on a regular basis and can be imported with ease.

The EndoPilot customizes to your wishes by different stages of expansion. Various components can be added to the device at anytime. For example, it is possible to add a DownPack or BackFill component at a later point in time, if not obtained initially with the unit.

Invest in your future and secure a maximum of flexibility for yourself!

#### **EndoPilot comfort:**

ApexLocator EndoMotor





#### **EndoPilot comfort plus:**

ApexLocator EndoMotor DownPack BackFill

## **EndoPilot & CoPilot:**

ApexLocator
EndoMotor
DownPack
BackFill
Ultrasonic
battery operation
wireless foot switch
D-Pack connection



## **ApexLocator**

### Patented, state-of-the-art digital ApexLocator

Precise electronic length determination of the root canal space is obtained using a pulse measuring technique. Thanks to the most modern, ultra-fast microprocessor technology, exact determination with 10 Bit-resolution is possible. The quick signal analysis of the EndoPilot enables continual length determination during canal preparation in real time.

The ApexLocator can of course also be used separately with a manual file clamp for initial length determination. The measured value is conveniently saved using the foot switch, automatically transferring it as the working length during the canal preparation.

In combination with the patented EndoPilot contra-angle, you have full control over the current file position during the preparation. The contra-angle sends the signal of the ApexLocator directly to the file and offers a continuous supervision of the file position.

The preparation depth can be adjusted directly on the display by simply sliding the reference marker (a horizontal line in the Apex-indication).

An additional safety function is the supervision of separate source (external) voltage, warning against interfering currents, which could possibly lead to inaccurate measurements.





## **MotorSystem**

#### With integrated length determination (ILD)

The torque- and speed-controlled electronic EndoMotor provides for efficient preparation of the root canal spaces. The lightweight motor offers a maximum in feel control. In addition, the coloured LED-lights inform the operator of the rotation direction, the torque limit, as well as apex position. An additional twist function avoids intra-canal jamming of the file by alternate left-right rotations.

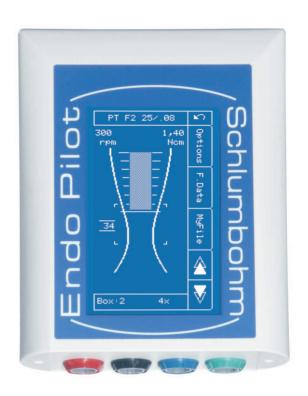
A freely programmable reciprocal drive can be selected for each file. It is possible to save different rotation profiles for each file.

In combination with the patented EndoPilot contra-angle, you have full control over the file position. The contra-angle, specifically developed for endodontics, forwards the signal of the ApexLocator directly to the file and offers a continuous supervision of the file position. The contra-angle and the motor are fully isolated, therefore no further electric isolation is necessary. There are especially also no inconvenient file contact clamps necessary, which hamper a quick change of files.

The preparation depth can be adjusted directly on the touch display by simply sliding the marker (a horizontal line in the Apex-indicator box).

A touch of the screen is all that is required for the EndoPilot to automatically select the next file within the file sequence.

Another patented safety feature is the torque reduction upon approaching the apex. This function limits the cutting performance of the file in the apical area and provides for the constant removal of dentinal filings from the canal (as opposed to changing the direction of rotation used by many devices which transports the filings back towards the apex).





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## **File Library**

#### Pre-programmed database of all major file systems

The file database contains almost all common nickel-titanium file systems and provides for a free selection of the file systems. All parameters of each file is preset to the manufacturers recommendations, however can be changed according to individual preferences. The EndoPilot offers memory capacity for 1000 different files as well as individual torque and speed settings for all major NiTi-systems.

New files and/or functions can be updated with ease using update-cards.

## File-Management

#### Automatic registration of file-wear

The patented file management system supervises the filewear by measuring the cumulative load per file. The important wear-parameters: speed, torque and duration of use are recorded and are computed as a wear-value.

The canal curvature may be pre-selected as wear factor. An individual limit of the file-alarm can be selected for each file.

The wear-values determined will also be saved when the device is turned off. In total, up to 8 file boxes with any number of different files can be administered through the file management system.





## **Favourites**

#### Individual design of the start page

This feature permits easy access to your 3 most commonly used file systems on the start screen page of the mechanical preparation function.

All additional file systems are listed in alphabetical order on the following screen pages.

## **MyFile-System**

# Configuration of customized sequences with hybrid technique

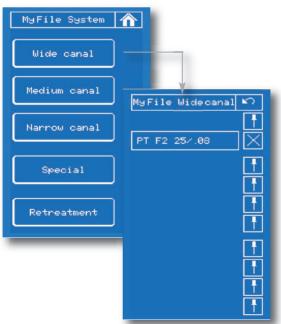
This function allows for an efficient configuration of individual instrument sequences, independent of the manufacturer. Single files can be combined in any order from the pre-programmed file database. You can individually configure 5 customized sequences with up to 10 files in each sequence. All files from the pre-programmed database are available to use in the MyFile-sequences. That means that a total of 50 storage spaces are available.

Speed and torque values are automatically adopted from the database. Changing these values by the user is possible, as well as re-setting to factory settings (according to the recommendation of the file manufacturer) is easily accomplished.

The file identification appears clearly on the display so you are always aware of which file is in use.







## **Downpack**

#### Warming within seconds

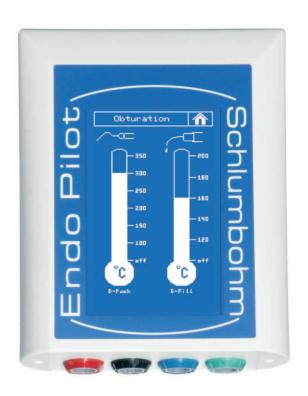
A primary objective of endodontic treatment is to obtain complete filling of the prepared and disinfected root canal system. The Downpack-module assists in obtaining a compact, three-dimensional filling of the apical third. With the warm vertical condensation technique, homogenous root canal fillings can be produced very efficiently.

The ergonomic, lightweight D-Pack hand piece guarantees optimal handling. The slim design allows for unobstructed view of the treatment field. The powerful element enables warming of the heating tip within seconds. The desired heating temperature can be easily selected via the touch screen display. An integrated LED display in the base of the hand piece keep the operator informed about the heating process.

Replacement of the heating tip is easy, quick and safe, with the easy grip screw lock. A variety of heat tips, to fit all canal sizes, are available:

	Size	Colour	Order No.
Heating tip XF	040/.04	green	109 0156
Heating tip F	050/.04	grey	109 0152
Heating tip FM	050/.05	yellow	109 0153
Heating tip M	050/.07	red	109 0154
Heating tip ML	050/.09	blue	109 0155







## **Backfill**

#### Optimal control of the flow velocity

The thermo-plastic filling of the medium and coronal third is executed with the help of the Backfill Gun. The gun handle provides for optimal control of the filling process. The lever of the gun handle is easy to operate and the flow velocity can be optimally adjusted. Different temperatures can be pre-selected via the touch screen display, the high-performance heating element allows for short heating times.

Standard Gutta-Percha pellets are used as filling material. The needle fill tips are easily threaded on to the gun and can be shaped for improved access into the canal. Three different fill tip sizes are available.

		Size	Colour	Order No.
	Needle	Ø 25ga	yellow	109 0144
0	Needle	Ø 23ga	white	109 0145
	Needle	Ø 20ga	red	109 0146







#### **CoPilot**

#### The ultrasonic extension module

The CoPilot is the perfect supplement for the EndoPilot and when combined with an EndoCart expands it to a complete all-in-one-unit.

The CoPilot module adds the following functions to the EndoPilot base unit:

- Ultrasonic handpiece
- Additional DownPack connection
- Wireless twin footswitch
- Battery operation

The ultrasonic adjustable countdown timer allows for a standardized irrigation protocol.

In addition, the CoPilot module offers a twin wireless foot switch, as well as complete battery operated use of EndoPilot and CoPilot, allowing operation independent from an electrical supply.

The CoPilot module is easily plugged into the EndoPilot base unit and the upgrade can be performed at any time retroactively.



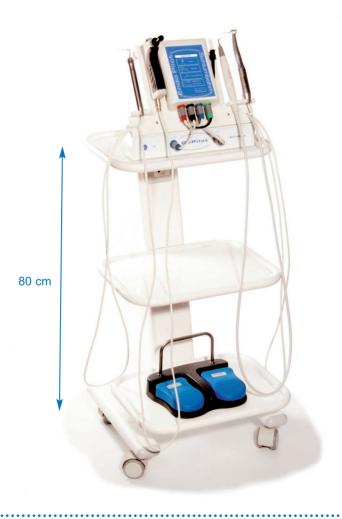


## **Trolley**

#### The EndoCart for the EndoPilot

Prepared with three drill holes for the easy mounting of the EndoPilot/CoPilot to the EndoCart trolley.

- 3 vertically stacked shelves/trays
- 2 sockets
- Tray size: 40 x 30 cm



#### **Wireless Foot switch**

### Wireless handling

Use your EndoPilot with a wireless foot switch, even without the CoPilot.

The receiving module is simply interconnected between the power supply of the EndoPilot. The cable foot switch is completely replaced.

There are 2 wireless foot switches available:

- single wireless foot switch
- twin wireless foot switch

An additional select-key within the twin wireless foot switch permits selection to the next file. The carry bow allows for an easy moving of the twin wireless foot switch with the foot.











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