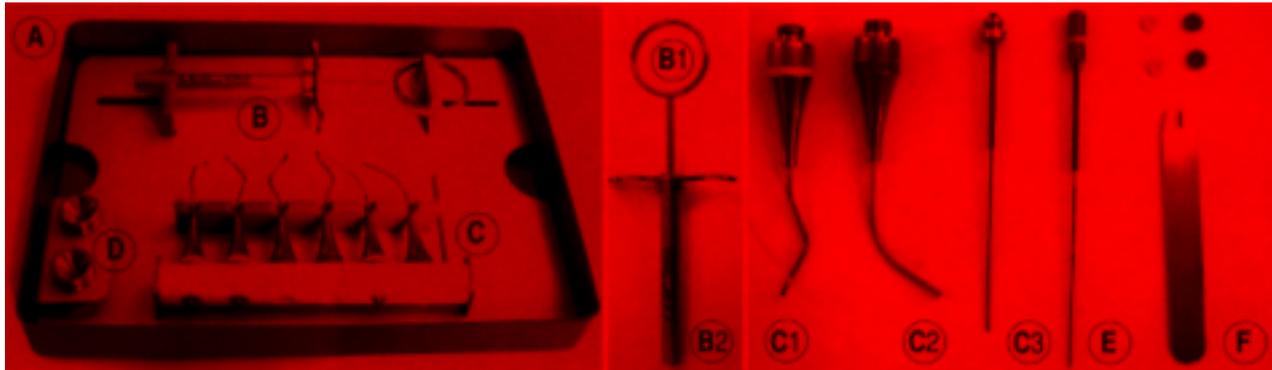


«Surgical» Kit

REF 202 30

The MAP (Micro-Apical Placement) System, «Surgical» Kit, provides a unique, efficient method for placing root-canal repair materials (ProRoot, Super EBA, amalgam, etc.) :

- either by retrograde obturation after apical resection, thanks to the specially designed triple-angle needles (left and right) for both anterior and posterior teeth
- or by orthograde obturation into the root-canal for the treatment of pulp-capping, perforations and root-end fillings, using the curved needles.



triple-angle
right-hand side

The «Surgical» kit of the «M A P» System offers :

- (A) A sterilizable aluminium case.
- (B) A stainless steel syringe with a spring loaded plunger (B1) and a piston latch (B2) to ensure fast and easy needle changing.
- (C) 6 interchangeable needles (C1) or (C2) each with individual colour-coded pistons (C3) in NiTi (re-usable) and/or PEEK (disposable), with a special hook device for simple needle exchanges.
- (C1) > 4 «triple-angled» needles (left and right angled) with disposable PEEK* pistons (C3) (6 for each \emptyset), designed by Dr. B. Ilgenstein, Switzerland
They can be used in conjunction with any type of ultra-sonic tip currently used for apical resection in dental surgery, especially the SONICretro tips designed by Dr. Ilgenstein.
- (C2) > 2 curved needles with NiTi** pistons (C3) (1 for each \emptyset) which have been specially designed for the insertion of repair or obturation materials directly into the root-canal (orthograde obturation).



The needles are color-coded by size

	\emptyset ext.	\emptyset int.
yellow	0.90 mm	0.60 mm
red	1.10 mm	0.80 mm



* PEEK = medical autoclavable biocompatible polymer

** NiTi = shape memory Nickel Titanium alloy

- (D) 2 stainless steel wells for repair materials to facilitate the filling of the needles (see «directions for use»).
- (E) 2 color-coded cleaning devices designed to correspond to each size of needle and ensure thorough cleaning.
- (F) 1 set of colour-coded silicone rings plus 1 ring-remover, designed to remove excess material from the needle tips prior to placement.

Directions for use

1. Prepare the instrument :

- > Insert the colour-coded piston (C3) into the corresponding colour-coded needle (C1) or (C2). Due to their minute size, the PEEK pistons (intended for «triple-angled» needles only) should be **inserted with great care** as bending or twisting when inserting can cause breakage.
- > PEEK pistons are **disposable** and meant for one single operation, whereas NiTi pistons (intended for curved needles only) can be used repeatedly.
- > Attach the selected needle to the syringe as follows :
 - press the syringe plunger (B1) down to release the piston latch (B2)
 - while holding the plunger down, attach the piston hook to the piston latch
 - release the plunger (B1)
 - screw the assembled (C) needle onto the syringe (B)
- > **Filling the needle**
 - ensure that at least one silicone ring (F) is threaded onto the corresponding needle (if several placements are foreseen for the same operation, thread several rings)
 - place the repair material in the stainless steel well (D)
 - make sure the plunger (B1) is completely released and dip the needle tip into the well to fill with material
 - wipe excess material from the needle tip using the ring-remover (F) to slide the silicone ring off the needle
- > **Placing the repair material**
 - press the syringe plunger down (B1) to expel the material
 - repeat steps as necessary

> **Clean the needle immediately to prevent the material from hardening inside.**

2. Cleaning instructions

The inside of the needle must be cleaned before the repair material has had time to harden. This is essential. If cleaning is not carried out in time, the needle can easily become plugged and useless and the PEEK piston is very likely to stick to the material and jam inside the needle.

- > once the material is placed, press the syringe plunger (B1) down two or three times to expel residual material
- > hold the syringe plunger down (B1), unscrew the needle (C) and remove the piston (C3) from the piston latch
- If time is lacking for immediate cleaning, submerge the entire head in a Ringer (or equivalent) solution, making sure the plunger is fully inserted inside the needle
- > as soon as possible, remove the piston from the needle **without twisting it**
- > insert the color-coded, cleaning device (E) into the threaded end of the corresponding needle
- > to clean the needle thoroughly, push the cleaning device up and down with a twisting movement
- > finish cleaning in an ultrasonic bath
- > (N.B. «Superfloss®» (dental floss) has also been reported as an efficient means of cleaning the needle head)
- > clean the NiTi piston and the well (PEEK pistons are disposable so no cleaning is necessary)
- > when necessary, clean the aluminium sterilization case
 - (avoid using a dish-washer, ultrasonic baths and acid or basic chemicals for cleaning)
- > air-dry
- > re-thread one or more silicone rings onto the needle
- > return the instrument to the aluminium case without re-inserting the PEEK piston into the corresponding needle
- > sterilize in autoclave (the PEEK pistons should be sterilized separately from their needles)

