

MM-ENDObook

Your endo guide



MM-ENDObook

The *MM-ENDOBook*, dedicated to endodontics, will guide you through each stage of the treatment, retreatment, irrigation and obturation.

- 04 Working length
- 06 Speed and torque
- 10 Endodontic treatment
- 24 Endodontic retreatment
- 27 Final Irrigation
- 30 Obturation

Simplicity
Efficiency
Safety...

Working length

The first step of each endodontic treatment is the scouting of the root canal with a stainless steel hand file which provides information on the canal diameter, its curvature and its level of mineralization. This information completes the one obtained through the preoperative x-ray so that possible obstacles and difficulties can be foreseen.

In a second step, the working length is determined, still with the same hand file in combination with an apex locator.

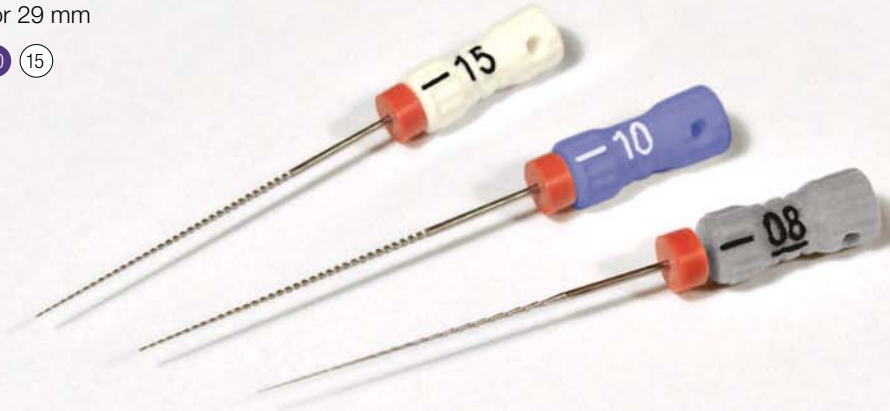
MMC files

How to efficiently assess the root canal anatomy?

The scouting of the root canal is accomplished with a pre-curved stainless steel hand file which provides information about the root canal anatomy. The level of mineralization of the canal lumen and the degree of curvature determine the treatment's difficulty and thus the most suitable sequence for the clinical case.

MMC files K Type:

L 21, 25 or 29 mm



- Ergonomics of the handle: good file grip.
- Radiopaque silicone stop for perfect adjustment to the working length.

Speed and torque

The use of Nickel-Titanium files requires total compliance with the recommended protocol and speed, in order to optimize the effectiveness of your instruments and limit the risk of breakage in the canal.



AX'S Endo[®]

How to efficiently use rotary NiTi files?

AX'S ENDO[®] is a contra-angle which represents a considerable gain in time, maneuverability and reliability during each of your treatments.

AX'S Endo[®]: 2 reduction ratios

- 04 (100:1)
- 08 (50:1)

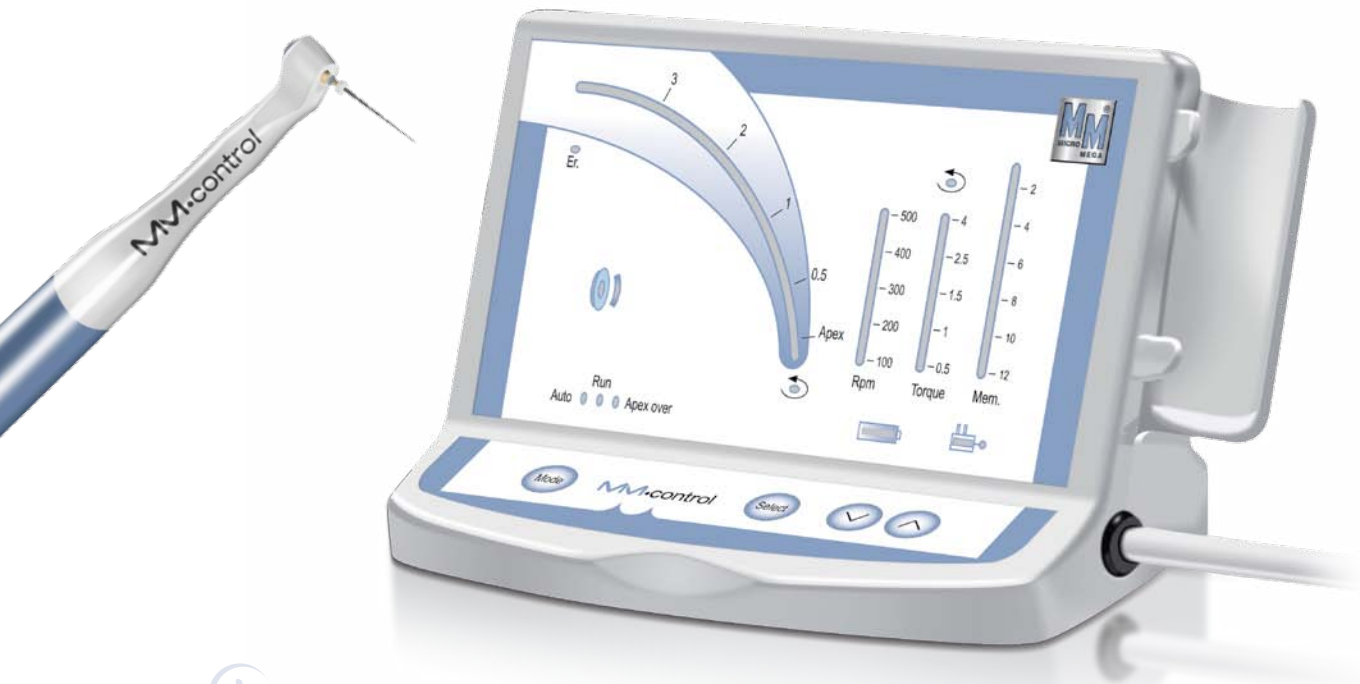


- Increased visibility thanks to its thin neck and straight shaft.
- 20° angle, for improved visibility of the operating field.
- Automatic locking of the root canal instrument.

MM•control

How to perform a safe endo treatment?

MM•control is an endo motor with torque and speed control + integrated apex locator. An indispensable endo tool offering reliability, simplicity and safety.



- Proven reliability.
- Simplicity of implementation.
- Safe endodontic procedure.

Proven reliability

- Controls the speed which remains stable according to the anatomical conditions of the canal.
- Apex locator precision: instant, reliable and precise indication of the apical distance thanks to the triple-frequency (100 Hz; 333 Hz and 10 kHz).
- Contra-angle designed with high-performance composite: unique resistance to shocks, cleaning and disinfecting products, sterilization, etc.
- Ergonomics of the electrically insulated contra-angle which does not require the use of an insulated sleeve. No fork which might hamper the use of the contra-angle.

Safe control of procedure

- Safely controls the file progression towards the apex.
- Torque control and auto-reverse of rotation direction: less stress on the instrument to minimize the risk of instrument breakage.
- Integrated apex locator avoids passing beyond the apex. Automatic reversal of the direction of rotation.

Simplicity of use

- Easy to use: simple and intuitive interface.
- Space saving all-in-one device: no need to buy an additional separate apex locator.
- In “Auto” and “Apex Over” mode, the file starts automatically when entering the canal.

Use in continuous rotation

- A principle with scientifically proven efficiency versus reciprocation.
- Apical debris extrusion with reciprocating movement is higher than with continuous rotation.



Scientific references

Apically extruded debris with reciprocating single-file and full-sequence rotary instrumentation systems.
Bürklein S., Schäfer E. / JOE – 2012 June

Quantitative evaluation of apically extruded debris with different single-file systems: Reciproc, F360 and One Shape® versus Mtwo.
Burklein, Shaefer & Benten / IEJ — 2013 July 6

Endodontic treatments

The objective of each endodontic treatment is the prevention or elimination of any periapical lesion. The respect of the canal anatomy from the coronal to the apical third is an essential factor which determines the treatment's success. The 5 steps of the root canal preparation are: 1) access cavity, 2) establishing the glide path, 3) shaping, 4) irrigation and 5) obturation.

It is in this perspective that MICRO-MEGA® offers convenient solutions in order to make your root canal treatment even simpler and safer. The simplification, safety and efficiency of endodontic treatments are some of our major concerns!

You can be sure to find the solution which best suits your needs and work habits among our wide range of endo products.



One Flare

How to efficiently prepare canal entrances?

One Flare is a NiTi instrument in heat treatment **T•Wire** to be used at the beginning of the treatment in order to eliminate axial coronal constraints. This step is essential to avoid strains on the shaping instruments and thus limit the risk of premature instrument breakage.

One Flare: N°25 – .09 - L 17 mm



T•Wire
technology



Scientific References

"The first step of the root canal preparation after completion of the access cavity consists of enlargement of the root canal entrances by eliminating dentinal overhangs. This step is essential as it prevents stress that may be caused on the following shaping instruments and therefore reduces the risks of instrument fracture. The enlargement of the root canal is generally performed using

a wide-tapered flaring instrument"
Hakan Arslan, Ertugrul Karatas, Ismail Davut Capar, Damla Ozsu, and Ezgi Dogonay.
Coronal Flaring Instruments and Dentinal Crack. 2014.
J.Endod.2014 Oct ; 40(10): 1681-3

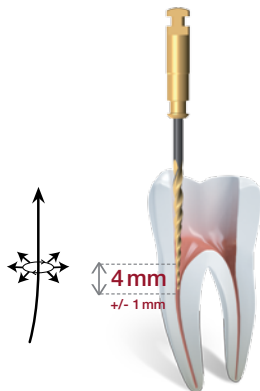
Safe progression

- One Flare efficiently allows for easier centering of the hand file used for glide path.
- The unhindered action of the hand file facilitates the penetration beyond its first insertion.
- By facilitating the straight line access to the middle and then to the apical third, the risk of fracture for the succeeding instruments is limited.

Elimination of the interferences at the root canal entrance

- The opening of the root canal through a selective brushing action of the instrument:
 - Exposes the canal entrances.
 - Reduces the risk of shaping instruments snagging on canal walls during insertion.

Protocol for use



With T•Wire

- More flexibility
- More resistance
- More safety

ENDOFLARE®

One Flare

+50%
of flexibility

Speed of rotation: 250 - 400 rpm
Max. torque: 3 N.cm

One G

What is the purpose of rotary NiTi files for glide path development?

Glide path development is an important and indispensable step in the root canal preparation.

The initial scouting is performed with an MMC hand file no. 10.

In case of difficult of access canals, mechanized NiTi files must be used. For this purpose, MICRO-MEGA® has designed **One G**, a sterile, single-use rotary NiTi file for glide path development which is indicated in this case, when hand files are not sufficient.

One G: N°14 – .03 – L 21, 25 or 29 mm



- Resistant to cyclic fatigue and twisting¹.
- Particularly useful for canals difficult of access and highly mineralized canals with strong curvatures.
- Safety: limits the risk of endodontic errors (creation of ledge, false canal, canal transportation, etc.).

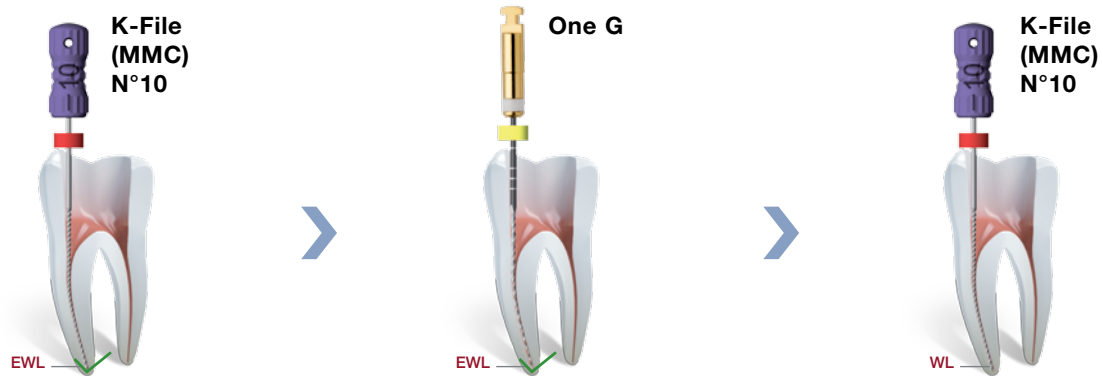


Scientific references

1 " The prototype of the uG file showed higher cyclic fatigue resistance than the G2 file and intermediary torsional strength and screw-in forces situated between the G1 and the G2 file."*
Jung-Hong Ha, DDS, MS, PhD, Chan-Joo Lee, PhD, Sang-Won Kwak, DDS, MS, Rashid El Abed, BDS, CO, JB, Dongseok Ha, DDS, Hyeon-Cheol Kim, DDS, MS, PhD
Geometric Optimization for Development of Glide Path Preparation Nickel-Titanium Rotary Instrument
J Endod – June 2015

* One G

Protocol for use



After the scouting of the root canal with a pre-curved K file N°10, the working length is estimated and transferred to the One G instrument.

If the K file no. 10 reaches the EWL, bring One G down to the EWL, irrigate and determine the WL using a K file N°10.

If the K file N°10 does not reach the EWL, bring One G down to the initially reached length, irrigate and bring the K file N°10 down to the EWL. Then introduce One G down to the EWL and determine the WL using a K file N°10.

Speed of rotation: 250 – 400 rpm - Max. torque: 1,2 N.cm

WL: Working Length

EWL: Estimated Working Length

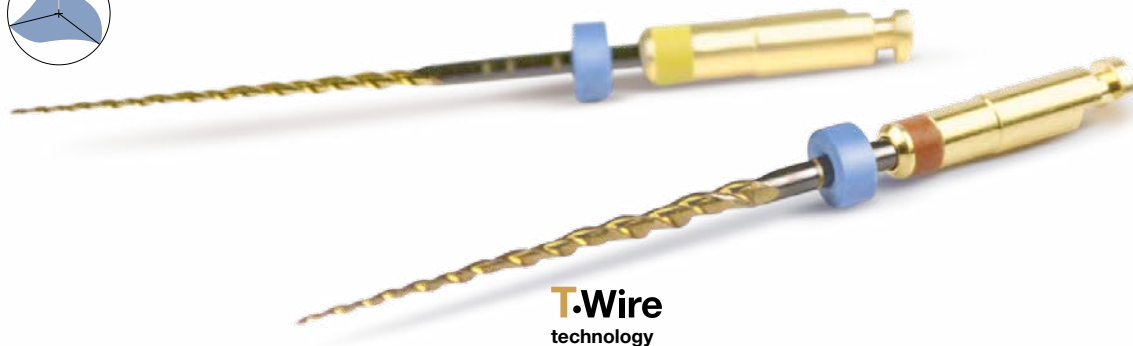
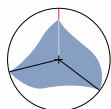
2Shape

How to simplify and secure your endodontic treatments?

2Shape is a sequence with 2 shaping files in continuous rotation which have been heat-treated using the **T•Wire** technology. The instruments' flexibility provides user comfort. Opt for an outstanding negotiation of curvatures with instruments which return to their initial shape after each use.

2Shape

TS1: N°25 – .04 – TS2: N°25 – .06 – L 21, 25, 31 mm



T•Wire
technology

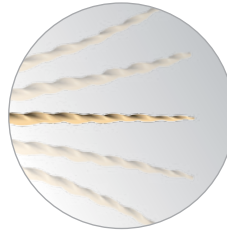


- Ergonomics: intuitive sequence of 2 shaping instruments in continuous rotation.
- Safety: **T•Wire** technology.
- Quality: new asymmetrical cross-section for respect of the original root canal anatomy and better cleaning of the root canal walls.

More flexibility

T.Wire

- Better negotiation of curvatures.
- Preservation of the elasticity of NiTi.
- More flexibility.



2Shape
Without heat-treatment

2Shape
With heat-treatment

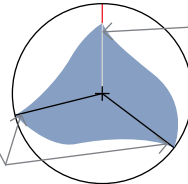
Up to
40%* more resistance
to cyclic fatigue

New asymmetrical cross section

3 cutting edges: the perfect compromise between efficient cutting and debris removal

2 main cutting edges

- For excellent cutting efficiency



1 secondary cutting edge

- For improved debris removal
- To reduce constraints on the instrument

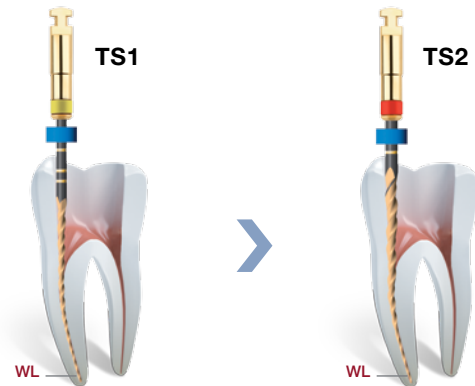


The asymmetrical cross section:

- Reduces the risk of instrument fracture¹
- Increases the efficacy of the circumferential brushing movements for efficient selective cleaning²

Protocol for use

Shaping with 2Shape



Progressive movement in three waves (3 up-and-down motion) with upward circumferential filing movement.

Insert the rotating instrument into the root canal until a resistance can be felt. Perform a circumferential brushing movement when feeling the resistance in order to eliminate the primary constraints. Remove the file from the root canal, clean the grooves and irrigate the root canal. Then continue the progressive downward movement.

2Shape is suitable for just about all treatments*.

**except rare anatomical aberrations*

Speed of rotation: 400 rpm - Max. torque: 2,5 N.cm

WL: Working Length

Scientific references

1 *Effect of Asymmetry on the Behavior of Prototype Rotary Triple Helix Root Canal Instruments.*

Franch Diemer, Jérôme Michetti, Jean-Philippe Mallet and Robert Piquet.

J Endod – 2013

2 *The Influence of Brushing Motion on the Cutting Behavior of 3 Reciprocating Files in Oval-shaped Canals.*

Shereen Alattar, DDS, DESE, Walid Nehme, DCD, DESE, Franck Diemer, DDS, MS, PhD, and Alfred Naaman, DDS, MSc, PhD.

J Endod – 2015 May

2Shape apical finishing

MICRO-MEGA® offers an optional solution with specific files for apical finishing. F35 for large and straight root canals and F40 for thin and curved root canals.

F35: N°35 – .06



or

F40: N°40 – .04

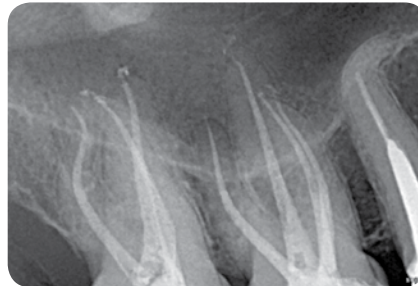


For large
and straight
root canals



For thin
and curved
root canals

Clinical case Prof. Walid Nehme, Lebanon



Preoperative x-ray of a 16 and a 17, both with deep caries and acute pulpitis. Both molars were shaped using the 2Shape sequence. The apical finishing of the palatine canals was carried out with a F35 file.

One Shape[®]

How to realize your endodontic shaping with one single instrument in continuous rotation?

One Shape[®] is one and only NiTi sterile instrument in continuous rotation for simple root canal shaping.

One Shape[®]: N°25 – .06 – L 21, 25 or 29 mm



- Asymmetrical cross section along the entire blade.
- Variable cross section.
- Longer pitch.

Simplicity

- One single reference to manage in stock.
- Only one sterile and single-use instrument.
- In continuous rotation: a recognized and mastered technique.

Safety

- Respect of the initial canal path.
- Respect of office hygiene.
- Asymmetrical cross section: limits the risks of instrument breakage due to the accumulation of strains on the file.

Efficiency

- Sterile: a reduction of the preparation time.
- Efficient cleaning: a decrease in the bacterial load similar to that of traditional instruments.
- Reduction of the global treatment time: more time for irrigation.
- Lower quantity of apically extruded debris.



Scientific references

One Shape® has antibacterial results comparable with traditional instruments.

Dagna et al. Int J Artif Organs 2012
Nabeshima et al. J Endod 2014

One Shape® respects the original canal curvature better than Wave One and Reciproc.

Saleh et al. J Endod 2015
Bürklein et al. Int Endod J 2013

One Shape® is safe to use and has good mechanical resistance.

Dagna et al. Dentistry 2013
Capar et al. Austr Endod J 2014
Dagna et al. J Conserv Dent 2014
Mangelli et al. ENDO (Lond Engl) 2015

Preparation time reduced with One Shape®, compared to:

Mtwo and F360 Bürklein et al. Int Endod J 2013
Reciproc and Wave One Saber et al. Int Endod J 2015
Wave One and F360 Saleh et al. J Endod 2015

One Shape® rotary instrumentation shows less debris extrusion compared to:

- *Reciprocal instrumentation* Bürklein et Schäfer. J Endod 2012 - Bürklein et al. Int Endod J 2013 - Küçükylmaz et al. Braz Oral Res 2014
- *ProTaper Next and Twisted Files*: Türker et al. - Int Endod J 2015

Root canal preparations with One Shape®, Reciproc and SAF cause less microcracks than with ProTaper.

Liu et al. J Endod 2013

Protocol for use

Shaping with One Shape®



Place One Shape® down to the 2/3 of the WL using an in and out movement without pressure. Perform an upward circumferential filing movement in order to pre-enlarge the canal. Withdraw the One Shape® instrument from the root canal and clean it. Irrigate and check canal patency with a #10 K file.

Reintroduce the One Shape® instrument into the root canal and place it down to 3 mm from WL using an in and out movement without pressure. Withdraw the One Shape® instrument from the canal and clean it. Irrigate and re-check the canal patency with a #10 K file.

Reintroduce the One Shape® instrument into the root canal and take it down to the WL by performing the recommended in and out movement. The WL can be reached in one or more passages (file withdrawal, cleaning of the file, irrigation and patency check) depending on the complexity of the canal anatomy.

Speed of rotation: 350-450 rpm - Max. torque: 2.5 N.cm
WL: Working Length

One Shape® Apical finishing

How to simply realize apical finishing?

MICRO-MEGA® offers an optional solution with specific apical finishing files, **One Shape® Apical**. These sterile, single-use NiTi finishing files are used after root canal shaping with One Shape® in order to enlarge the root canal diameter.

One Shape® Apical 1: N°30 – .06 – L 21, 25, 29 mm

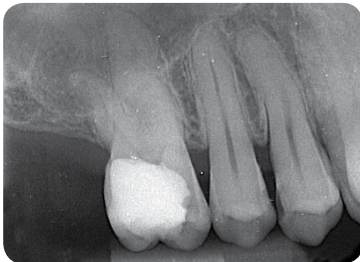


or

One Shape® Apical 2: N°37 – .06 – L 21, 25, 29 mm



Clinical case Dr. Tara Mc Mahon, Belgium



Preoperative x-ray



Postoperative x-ray

MM-EDTA Cream

How to temporarily obturate reliably and precisely?

MM-EDTA Cream ensures effective cleaning and shaping of the root canal system. Its lubricating action smoothes file penetration and facilitates the removal of debris.



- Facilitates the cleaning and shaping of the root canal system.
- Lubricates.
- Facilitates instrument access and penetration.

Endodontic retreatment

Endodontic retreatment (ERT) is indicated following the failure of an initial endodontic treatment.

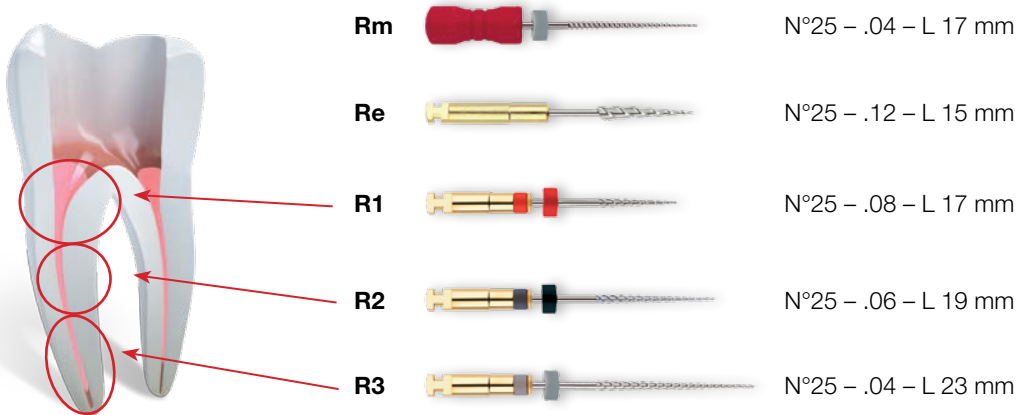


R-Endo[®]

How to make a retreatment effectively with complete safety?

R-ENDO[®] is a single and unique method with a simple protocol assuring maximum safety. It consists of 5 instruments for the removal of the obturation material and the shaping of the root canal. After use of R-ENDO[®], no complementary shaping method will be required.

Each level of the radicular zone is progressively attained.



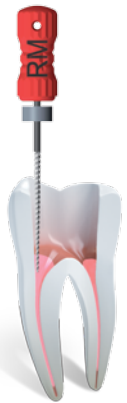
- Files specially designed for ERT.
- Rapid: 5 NiTi instruments (Rm, Re, R1, R2, R3).
- Simple: a protocol that is easy to memorize.
- Safe: inactive tips.

Protocol for use

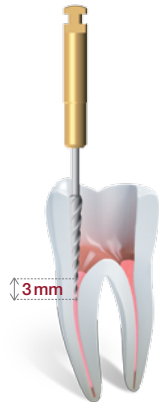
Phase 1: Pre-operative analysis: 1 Pre-operative X-ray. 2 Placing of rubber dam. 3 Removal of coronal restorations and posts. 4 Access re-opening. 5 Visual and tactile analysis of filling material(s). 6 Solvent choice.

Phase 2: Operative sequence: a protocol in 5 main steps.

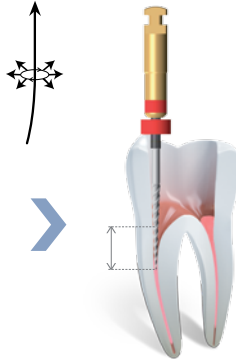
Lime Rm



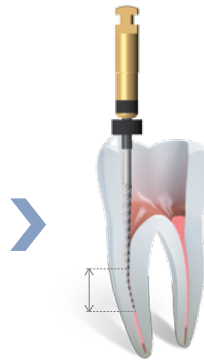
Re



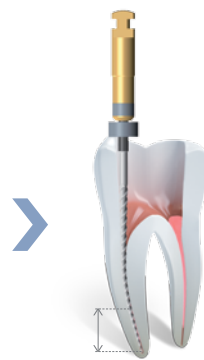
R1



R2



R3



- 1/4 turn with pressure directed towards apex.
- Removal.

- Canal penetration: 1 to 3 mm under pulp chamber floor without having to force the instrument.
- Apical pressure control, stop as soon as instrument requires force to penetrate.
- Circumferential filing.

- Canal penetration through repeated limited pushing actions in apical direction (push and retain).
- Preparation from the coronal third to the beginning of the middle third.

- Canal penetration through repeated limited pushing actions in apical direction (push and retain).
- Preparation from the middle third to the beginning of the apical third. Never pass the length reached with the MMC N°10.

- Canal penetration through repeated limited pushing actions in apical direction (push and retain).
- Insert R3 to WL or near WL according to the canal anatomy.

Speed of rotation: 300-400 rpm

Final irrigation

Final irrigation is an essential step of your endodontic treatment. The root canal anatomy often presents peripheral zones which are inaccessible for the instruments such as isthmuses or secondary canals. Studies show that over a third of the radicular surface remains loaded with bacteria after root canal shaping, regardless of the technique¹ used.

Furthermore, debris and smear layer generated by instrumentation obstruct the dentine tubules thus limiting their disinfection through irrigation.

For complete cleaning and disinfection, MICRO-MEGA® has designed EndoUltra™, a handpiece for the intra-canal activation of the irrigant allowing for the reopening of the tubules and the dispersion of the irrigation solution in all the aspects of the root canal system within the shortest possible time.



EndoUltra™

How to optimize final disinfection in the shortest possible time?

Regarding efficient irrigant activation, the superiority of ultrasound compared to conventional or sonic methods is an established fact. For a complete endodontic treatment and the cleaning and disinfection of the anatomically difficult zones, MICRO-MEGA® completes its product range with **EndoUltra™**, a concentrated technology for the ultrasound activation of irrigation solutions.



- Better cleaning and disinfection quality compared to conventional or sonic methods².
- Comfort and ease of use.
- Respect of the root canal anatomy³.

Better cleaning and disinfection quality

- Eliminates biofilm and smear layer and facilitates upward debris removal⁴.
- Facilitates the penetration of the irrigant into the non-instrumented zones.
- Reduces the bacterial load⁵.
- Improves the sealing of the obturation⁶.

Respect of the root canal anatomy

- Passive activation.
- Cavitation and sound propagation respecting the tooth structure³.

Comfort and ease of use

- 30 seconds for activation without prior adjustments, to be repeated at each irrigant renewal.
- Ergonomics for the practitioner, comfort for the patient.



Scientific references

1 *Effects of four Ni-Ti preparation techniques on root canal geometry assessed by micro computed tomography.*
Peters O.A., et al. Int Endod J - 2001

2 *Efficacy evaluation of a cordless ultrasonic unit in achieving reduction of bacterial load within the root canal system as compared to a conventional ultrasonic unit.*
Jaramillo D., et al. - AAE 2017

3 *A micro-CT assessment of dentin removal following passive ultrasonic irrigation*
Ball V. J., et al. - J Endod - 2016

4 *In vivo debridement efficacy of ultrasonic irrigation following hand-rotary instrumentation in human mandibular molars.*
Nusstein J., et al. J Endod - 2005

5 *Review of ultrasonic irrigation in endodontics: increasing action of irrigating solutions*
Mozo S., et al. Med Oral Patol Oral Cir Bucal. - 2012

6 *An evaluation of the influence of passive ultrasonic irrigation on the seal of root canal fillings*
Van Der Sluis L.W.M, et al. J Endod - 2007

| Obturation

Obturation guarantees the three-dimensional sealing of canals and conditions the success of the endodontic treatment in the long term.

Whether temporary or permanent, obturation is an important stage for which MICRO-MEGA® has developed reliable, practical tools that will make your job easier.



MM-MTA™

Root canal repair cement

MTA (Mineral Trioxide Aggregate) that allows successful repair of iatrogenic accidents while reducing the associated pathological complications. Currently, clinically approved MTA products are available within the dental marketplace. However, MTA traditionally has a long setting time and an often grainy consistency which makes placement more difficult.

MICRO-MEGA® offers **MM-MTA™**, an endodontic repair cement that has excellent physiochemical characteristics. MM-MTA™ incorporates a faster set time with a pasty consistency for easy handling and placement.



- Biocompatibility.
- Formation of a protective waterproof layer, resistant to bacterial infiltration.
- Excellent adhesion to the dentine.
- Optimal results, even in humid conditions.
- Radiopacity.

Pastinject®

How to perfectly coat the canal walls?

Pastinject® for perfect application of sealing cements, calcium hydroxide and paste.

Pastinject®

Plastic handle

L 21, 25 or 29 mm



Individual Sizes 15 → 40

Assortment by box 25 → 40



- Its great flexibility allows it to perfectly follow the shape of the canal.
- The instrument's helical shape creates a translational movement, facilitates the transport of the filling material and guarantees its perfect application onto the canal walls.

| How to temporarily obturate, reliably and precisely?

MM-Paste

MM-Paste (Calcium Hydroxide with Barium Sulfate) is the solution for a temporary antiseptic obturation of infected canals (acute or chronic infection), temporary obturation between sessions and temporary obturation of canals in the case of root fracture.



- Water-soluble for easy cleaning prior to final filling.
- Barium sulphate content, radiopaque.
- Syringe for quick and easy application.
- Flexible tips for precise and controlled access to root canals.
- Single-use tips prevent cross-contamination.

MM-Seal™

MM-Seal™ is a high quality, epoxy resin-based paste/paste sealer for permanent filling of root canals. Its outstanding chemical and physical properties provide excellent sealing of root canals. Eugenol-free, biocompatible and radio-opaque. It can be used for all gutta percha obturation techniques.



- Dual-syringe design for accurate dispensing.
- Homogeneous, free of air bubbles and easy to mix.
- Penetrates superbly into the smallest lateral canals.
- Can be worked for 35 minutes at 23°C.
- Sets in 45 minutes at 37°C, allowing stress-free placement of gutta percha cones.

How to obturate quickly and reliably?

HEROfill® is an endodontics obturation system, based on the principle of a rigid plastic core coated with thermoplastic gutta percha. The enhancements found in the HEROfill® system add accuracy and dependability to the well documented apical seal that may be obtained with endodontic obturators.



1 Select the appropriate size HEROfill® obturator. Generally this will be the same size as the last file used at the apex of the canal.



2 Confirm the selected obturator size by inserting the matching HEROfill® Verifier into the canal to the working distance.



3 The chosen obturator is placed in one of the slots by its colour-coded handle. Activate the timer by pressing the ON icon.

4 While the obturator is heating, mix and place any heat resistant sealer (MM-Seal™ recommended). Using HEROfill® Verifier, place a thin coating of sealer on the wall of the canal.



5 After the tone, remove the HEROfill® obturator. Without twisting the handle, immediately insert it into the canal to the working distance.



6 Allow the gutta percha to cool for 3-4 minutes. Confirming radiographs may be taken during this time.



7 Remove the handle by twisting it. Cut away excess plastic core with a small inverted cone bur and trim away the extra gutta percha.



- Detachable handle.
- Adjustable working length.
- Easy control owing to the HEROfill® Verifiers.
- Rapid heating with HEROfill® Oven.
- Easier post space preparation.

Obturators



Verifiers



Gutta Percha Points and Paper Points

How to perfectly obturate root canals after shaping with One Shape® or 2Shape?

MICRO-MEGA® developed reliable and practical tools to simply obturate after shaping with One Shape® and 2Shape.



Gutta Percha Points

- Special taper adapted to your sequence.
- Radiopaque.
- Flexible for perfect adjustment to all root canal anatomies without bending.

One Shape®



2Shape



60 points
per box.
L29 mm.

One Shape®



60 points
per box.
L29 mm.

2Shape



STERILE

Blister containing
200 paper points
(6 points per cell)
L29 mm.



Paper Points

- Quick and efficient drying.
- Easy-to-identify sizes due to the same color code.
- Shaped for easy and reliable placement to the apex.

Revo Spreaders

Revo Spreaders have an excellent gutta percha plugging ability and are meant for lateral condensation obturation technique after use of the Revo-S™ files.



- High flexibility and excellent root canal curve negotiation owing to NiTi.
- .04 taper for optimal sliding of the spreader along the gutta percha cone.
- 90° point for optimum gutta percha plugging.



Revo Condensor

Revo Condensor is the ideal instrument for thermomechanical condensation technique: the gutta percha is heat plastified through friction. Revo Condensor's inverted H-type file profile guarantees an efficient transport of the gutta percha inside the root canal.

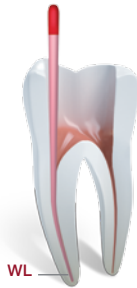


- More safety and flexibility thanks to NiTi.
- Simple to use: only one instrument is used whatever the root canal preparation.



N°30 – .04

Obturation



1st step

Select the master cone (GP Point) corresponding to the last file used and try it in a humid environment (2.6% NaOCl). Dry the canal using paper points and coat the canal walls with endodontic sealer MM-SEAL™.

Insert the master cone corresponding to the last file used for canal preparation into the canal until WL or WL -0.5 mm is reached.

Methods: 3 choices

Lateral condensation technique



Condense laterally using the biggest Revo Spreader (N°20, N°25 or N°30) allowing to reach WL -2 mm.



Then insert an accessory cone corresponding to the Revo Spreader until the level of the latter is reached and condense laterally. Repeat this operation (insertion and condensation of an accessory cone) until the endodontic space is completely filled.

Thermomechanical condensation technique



Insert the Revo Condensator into the root canal, set the motor speed at 10,000 - 15,000 rpm and slightly press against the master cone until its plastification.



Slowly pull the Revo Condensator out of the root canal using a slight up and down movement and performing light pressure on a canal wall.

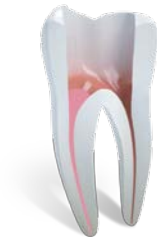
Combined condensation technique



Condense laterally using the biggest Revo Spreader (N°20, N°25 or N°30) allowing to reach WL -2 mm.



Then insert an accessory cone corresponding to the Revo Spreader until the level of the latter is reached and condense laterally. Insert the Revo Condensator into the root canal, set the motor speed at 10,000 - 15,000 rpm and slightly press against the cones until their plastification. Slowly pull the Revo Condensator out of the root canal using a slight up and down movement and performing light pressure on a canal wall.





Final step



Eliminate the excess gutta percha in the pulp chamber with the heated part of a plugger for vertical condensation. Maintain the pressure on the remaining gutta percha with the flat and cold part of the plugger.

WL: Working Length


MMC Files (P.5) - Advertising

 Medical device class I according to directive 93/42/EEC
 Medical device class IIA according to directive 93/42/EEC
 Certifying body: LNE/G-MED
 Medical device for dental care, meant for professional dental use only.
 See product labelling and, where applicable, instructions for use.
 MICRO-MEGA® 5-12, rue du Tunnel - 25006 Besançon cedex - France -
 www.micro-mega.com


AX'S ENDO® (P.7), MM•control (P.8), Pastinject® (P.32),
 Revo Condensor (P.36) - Advertising

 0459 Medical device class IIA according to directive 93/42/EEC
 Certifying body: LNE/G-MED
 Medical device for dental care, meant for professional dental use only.
 See product labelling and, where applicable, instructions for use.
 MICRO-MEGA® 5-12, rue du Tunnel - 25006 Besançon cedex - France -
 www.micro-mega.com


One Flare (P.11), One G (P.13), One Shape® (P.19),
 One Shape® Apical (P.22) - Advertising + Protocol for use

 0459 Medical device class IIA according to directive 93/42/EEC
 Certifying body: LNE/G-MED
 Medical device for dental care, meant for professional dental use only.
 See product labelling and, where applicable, instructions for use.



 Sterile devices

Sterility guaranteed if package is unopened and undamaged.
 MICRO-MEGA® 5-12, rue du Tunnel - 25006 Besançon cedex - France
 www.micro-mega.com



2Shape (P.15), 2Shape F35 and F40 (P.18),
 R-Endo (P.25) - Advertising + Protocol for use

 0459 Medical device class IIA according to directive 93/42/EEC
 Certifying body: LNE/G-MED
 Medical device for dental care, meant for professional dental use only.
 See product labelling and, where applicable, instructions for use.



 Sterile devices

Sterility guaranteed if package is unopened and undamaged.
 Can be sterilized in a steam sterilizer (autoclave) at the indicated temperature.
 MICRO-MEGA® 5-12, rue du Tunnel - 25006 Besançon cedex - France
 www.micro-mega.com


EndoUltra™ (P.28) - Advertising

 Medical device class I according to directive 93/42/EEC
 Medical device for dental care, meant for professional dental use only.
 See product labelling and, where applicable, instructions for use.
 EC REP Emergo Europe Prinsessgracht 20 - 2514 AP La Haye - Pays Bas

MM-Paste, MM-Seal™ (P.33), MM-EDTA Cream (P.23),
 One Shape® GP Points and One Shape® Paper Points,
 2Shape GP Points (P.35) - Advertising

 0120 Medical device class IIA according to directive 93/42/EEC
 Certifying body: SGS
 Medical device for dental care, meant for professional dental use only.
 See product labelling and, where applicable, instructions for use.
 EC REP Technical & General 2 Albion Place, London W6 0QT, United Kingdom


2Shape Paper Points (P.35) - Advertising

 0120 Medical device class IIA according to directive 93/42/EEC
 Certifying body: SGS
 Medical device for dental care, meant for professional dental use only.
 See product labelling and, where applicable, instructions for use.



 

 EC REP Technical & General 2 Albion Place, London W6 0QT, United Kingdom



HEROfill® (P.36) - Advertising

 2460 Medical device class IIA according to directive 93/42/EEC
 Certifying body: DNV GL Nemko Presafe AS
 Medical device for dental care, meant for professional dental use only.
 See product labelling and, where applicable, instructions for use.
 CMS Dental A/S - Elmevej 8, Glyngøre - 7870 Roslev, Denmark

MM-MTA™ (P.31) - Advertising

 0482 Medical device class IIA according to directive 93/42/EEC -
 Certifying body: Med/Cert
 Medical device for dental care, meant for professional dental use only.
 See product labelling and, where applicable, instructions for use.
 S & C Polymer Silicon- and Composite Spezialitäten GmbH
 Robert-Bosch Str. 2 - 25335 Elmshorn - Germany

Revo Spreaders (P.36) - Advertising

 Medical device class I according to directive 93/42/EEC
 Medical device for dental care, meant for professional dental use only.
 See product labelling and, where applicable, instructions for use.
 MICRO-MEGA® 5-12, rue du Tunnel - 25006 Besançon cedex - France
 www.micro-mega.com



MICRO-MEGA®

5-12, rue du Tunnel
25006 Besançon Cedex - France
Tel.: +33 (0)3 81 54 42 34
Fax: +33 (0)3 81 54 42 39
mmid@micro-mega.com

www.micro-mega.com



Follow us
on facebook!



A Sanavis Group Company