

EndoWave

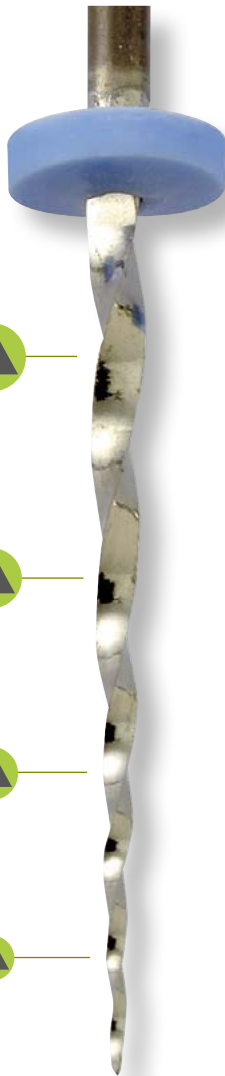
Enhanced safety for root canal preparation

Thinking ahead. Focused on life.



Features that make a difference

The triangular cross-section of the file minimizes the risk of fracture



3-point contact

2-point contact

1-point contact

No point contact

The main reason for choosing the EndoWave nickel-titanium file system is that it meets the need for increased efficiency and improved quality in root canal preparation. The files are made from a flexible alloy which permits them to follow different canal shapes. This reduces the risk of root canal aberration and ensures that even curved canals are safely prepared.

EndoWave nickel-titanium files meet all the requirements for root canal preparation

EndoWave files combine proven properties and new features. The result is that they not only facilitate preparation, they also provide the high standard of safety required by the operator:

Anti-screwing design

The unique "continuous wave design" of the files ensures that the files do not screw into or jam in the root canal. This wave design prevents the files being automatically drawn into the root canal, so preparation is much safer. The design also greatly reduces the amount of force the operator has to apply.

Unique safety tip

EndoWave files have a rounded tip that ensures maximum safety even when preparing the apical section of the root. The safety tip smoothly follows the contour of the canal, ensuring perfect preparation. No ledges are created even in narrow and severely curved canals.

Optimum cutting edges

The triangular design of the files produces sharp cutting edges, which excavate the root canal quickly and efficiently. This means that preparation requires less time and fewer instruments.

Extremely smooth surface texture

The files are specially conditioned electrochemically before they are finished to produce a surface that is not only exceptionally smooth but also harder than that of conventional NiTi files. The higher torsion resistance and metal fatigue resistance produced by conditioning increase the overall resilience and durability of the instruments. The advantage is that files can be operated at a higher speed.

Advantages of EndoWave files

- Five files for preparation
- No step formation in narrow and curved canals
- The tips follow the canal contour perfectly and prevent canal straightening
- Risk of instrument fracture
- Quick, safe preparation with higher rpm

EndoWave Kit A⁺/B⁺

Application of the EndoWave system

The EndoWave file system is based on the crown-down technique and is optimally designed for root canal preparation with five files that vary in diameter, length and taper.

With the basic procedure Kits A⁺ and B⁺, the operator can optimally prepare individual shapes of root canal. Kit A⁺ is more suitable for preparing normal root canals, while Kit B⁺ is more suitable for preparing narrow and severely curved canals. Only five files are required for preparation in a straightforward sequence. A set of five files with the required taper can also be ordered separately, if necessary.

Perfect root canal preparation with a handpiece

The EndoWave file system is optimally designed for use with the Morita DentaPort ZX. The Root ZX and TriAuto ZX modules provide the operator with a safe method of preparing root canals with a handpiece and simultaneously endometric measurement.

A⁺

Crown-down technique with procedure Kit A⁺ for normal root canals

ISO Taper #35 08 ISO Taper #40 06 ISO Taper #30 06 ISO Taper #25 06 ISO Taper #20 06

1. Use file #35/08 for preparing the site in the crown to the middle of the root canal

2. Then use file #40/06, #30/06 followed by file #25/06 down to a depth of 2 – 3 mm before the area to be treated

3. Use file #30/06

4. Use file #25/06

5. Use file #20/06 on the apical foramen

6. The preparation can then proceed to create the desired size along the entire working surface

B⁺

Crown-down technique with procedure Kit B⁺ for severely curved and narrow root canals

ISO Taper #30 04 ISO Taper #25 04 ISO Taper #20 04 ISO Taper #15 04 ISO Taper #20 02

1. Use file #30/04 to prepare the site in the crown to the middle of the root canal

2. Use file #25/04 or #20/04 to prepare the canal to the apical third. In some canals the whole working distance can already be achieved at this point

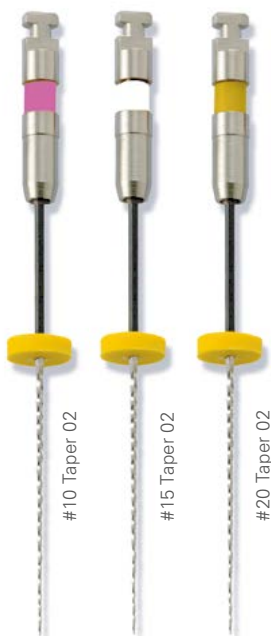
3. File #20/04

4. File #15/04 should extend through the entire working distance. Otherwise, the manual preparation must be improved

5. Use file #20/02 on the apical foramen

6. Then enlarge using files of increasing size #20/06 and #25/06

EndoWave MGP “Mechanical Glide Path” Kit NiTi files for mechanically enlarging canal access



MGP

Greater safety during root canal preparation!

At the start of preparation the enlargement of the coronal canal section, i.e. the creation of an access which is as straight as possible to reduce friction of the subsequent preparation instruments.

With the new EndoWave MGP files, it is also easy to prepare and enlarge the area in the crown with a handpiece. The enlargement of the crown canal sections also allows effective cleaning and disinfection since the effective volume and circulation of rinsing liquid is increased.

The instruments can operate at a speed of 800 rpm.

Speed 800 rpm
Torque 30 g/cm – 0.3 N/cm

EndoWave Hybrid Concept



Hybrid Concept Kit –
Economic preparation

HC

Root canal preparation with only three files

The EndoWave Hybrid Concept combines all advantages of the EndoWave files in only 3 NiTi-files. The Hybrid Concept joins the glide path concept and the crown down technique.

This economic file concept was developed in collaboration with international endodontic experts. The EndoWave Hybrid Concept provides an innovative solution for newcomers and experts which enables them to prepare quickly, effectively and reliably.

EndoWave OTR Kit



OTR File Kit –
optimized for the DentaPort ZX Set OTR

OTR

The efficient way of preparation

The EndoWave OTR filing sequence is converted specifically for the innovative Optimum Torque Reverse Function (OTR) of DentaPort ZX Set OTR and is therefore suitable for fast and safe root canal preparation. With only a maximum of three files the practitioner prepares efficiently and removes the debris in a short time.

Endodontics of the highest class:
reliable apex localization,
safe root canal enlargement
and efficient polymerization



Preparation with OTR Sequenz

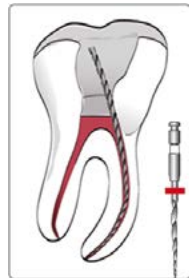
1. Establish the Glide Path

A number of papers show that a glide path has positive effects when shaping the root canal system. In easy cases a glide path can be established using only OTR 1 file (ISO15/Taper4), but where there is severe curvature, it is recommended to use the kit of 3 MGP files (#10/02, #15/02, #20/02).

M1: 300 rpm., 2 torque bar, (0,4 N/cm)
 M2: 500 rpm., 2 torque bar, (0,4 N/cm)



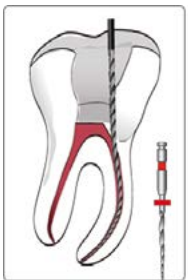
Initial situation molar with dentin interference



OTR 1
 ISO TAPER
 #15 04
 M1 M2 M3

Glide Path with #10 hand file or OTR 1 (ISO15/Taper4) at 500 rpm [M2]. In cases of obliteration use the MGP Kit to clear the path.

2. Shape the Root Canal

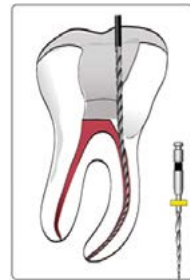


OTR 2
 ISO TAPER
 #25 04
 M1 M2 M3

Once the Glide Path is established, the OTR 2 file (#25/04 EndoWave) is used to shape the coronal and medium third portion of the root canal by using OTR mode (DentaPort ZX) with 300 rpm [M1].



If necessary determine the working length with Root ZX apex locator or just use Auto Apical Reverse with Denta-Port ZX.



OTR 3
 ISO TAPER
 #40 02
 M1 M2 M3

Now #40/02 can quickly and easily reach the apex [M1]. In most cases the root canal is ready for cleaning and filling. In severe curvatures EndoWave #20/04 [M2] up to #35/04 [M1] help the clinicians reach the apex.

EndoWave Accessoires

EndoBox ZX

The stainless steel EndoBox ZX with a Teflon insert provides sufficient space for sterile storage of eight EndoWave NiTi files. A sterimeter is included in the steribox for checking the sterility and there is a gauge for setting the working length.



EndoWave EDTA Gel

EndoWave Gel is an EDTA gel designed to ease the gliding of NiTi files in the root canal. The instruments glide along surfaces especially well and can be smoothly moved inside the canal. The moderate foaming of the gel during use makes canal cleaning even easier.



CromaCore Twix

If, after preparation, a core build-up or the insertion of a root post is dentally indicated, the hybrid composite CromaCore is available. The CromaCore allows to fill deep cavities simply, quickly and reliably in a single work-step. The combination of light curing and chemical curing ensures that the ideal degree of curing is always achieved.



EndoWave NiTi files

| Procedure Kit Kit A ⁺ for normal root canals | | | |
|--|-----|----------------|-----------|
| Taper | ISO | Working length | Order no. |
| 06 | 20 | 25 mm | 6820-225 |
| 06 | 25 | 25 mm | |
| 06 | 30 | 25 mm | |
| 06 | 40 | 25 mm | |
| 08 | 35 | 25 mm | |
| 06 | 20 | 31 mm | 6820-231 |
| 06 | 25 | 31 mm | |
| 06 | 30 | 31 mm | |
| 06 | 40 | 31 mm | |
| 08 | 35 | 31 mm | |

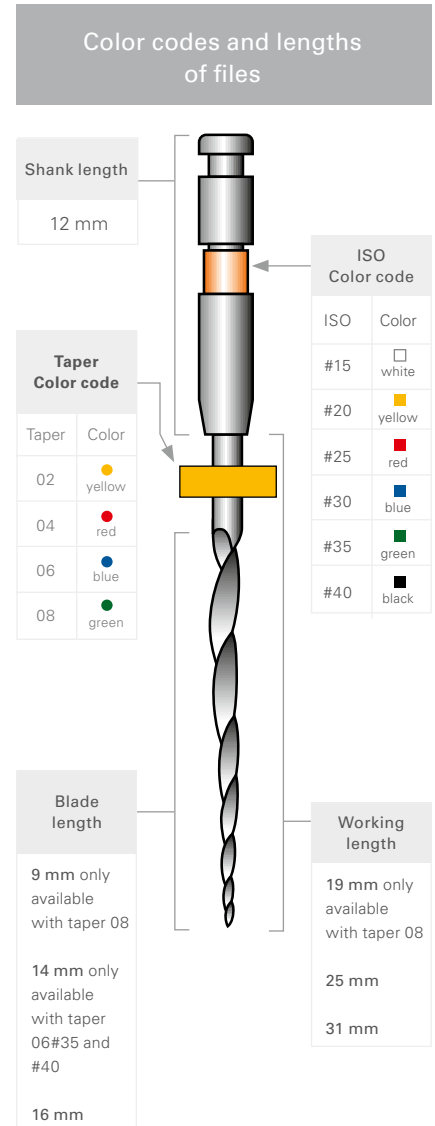
| Procedure Kit Kit B ⁺ for severely curved and narrow root canals | | | |
|---|-----|----------------|-----------|
| Taper | ISO | Working length | Order no. |
| 02 | 20 | 25 mm | 6820-325 |
| 04 | 15 | 25 mm | |
| 04 | 20 | 25 mm | |
| 04 | 25 | 25 mm | |
| 04 | 30 | 25 mm | |
| 02 | 20 | 31 mm | 6820-331 |
| 04 | 15 | 31 mm | |
| 04 | 20 | 31 mm | |
| 04 | 25 | 31 mm | |
| 04 | 30 | 31 mm | |

| MPG „Mechanical Glide Path“ Kit | | | |
|---------------------------------|-----|----------------|-----------|
| Taper | ISO | Working length | Order no. |
| 02 | 10 | 25 mm | 6820-002 |
| 02 | 15 | 25 mm | |
| 02 | 20 | 25 mm | |

| Hybrid Concept | | | |
|----------------|-----|----------------|-----------|
| Taper | ISO | Working length | Order no. |
| 06 | 20 | 25 mm | 6820-425 |
| 06 | 25 | 25 mm | |
| 08 | 35 | 19 mm | 6820-431 |
| 06 | 20 | 31 mm | |
| 06 | 25 | 31 mm | |
| 08 | 35 | 19 mm | |

| OTR „Optimum Torque Reverse“ Kit | | | |
|----------------------------------|-----|----------------|-----------|
| Taper | ISO | Working length | Order no. |
| 02 | 40 | 21 mm | 6820-300 |
| 04 | 15 | 25 mm | |
| 02 | 25 | 25 mm | |

| Refills (five files per taper) | | | |
|--------------------------------|-----|----------------|-----------|
| Taper | ISO | Working length | Order no. |
| 02 | 10 | 25 mm | 6825-210 |
| 02 | 15 | 21 mm | 6821-215 |
| 02 | 15 | 25 mm | 6825-215 |
| 02 | 20 | 21 mm | 6821-220 |
| 02 | 20 | 25 mm | 6825-220 |
| 02 | 20 | 31 mm | 6831-220 |
| 02 | 25 | 21 mm | 6821-225 |
| 02 | 25 | 25 mm | 6825-225 |
| 02 | 25 | 31 mm | 6831-225 |
| 02 | 30 | 25 mm | 6825-230 |
| 02 | 35 | 25 mm | 6825-235 |
| 02 | 40 | 25 mm | 6825-240 |
| 02 | 45 | 25 mm | 6825-245 |
| 02 | 50 | 25 mm | 6825-250 |
| 02 | 55 | 25 mm | 6825-255 |
| 02 | 60 | 25 mm | 6825-260 |
| 04 | 15 | 25 mm | 6825-415 |
| 04 | 15 | 31 mm | 6831-415 |
| 04 | 20 | 25 mm | 6825-420 |
| 04 | 20 | 31 mm | 6831-420 |
| 04 | 25 | 21 mm | 6821-425 |
| 04 | 25 | 25 mm | 6825-425 |
| 04 | 25 | 31 mm | 6831-425 |
| 04 | 30 | 25 mm | 6825-430 |
| 04 | 30 | 31 mm | 6831-430 |
| 04 | 35 | 25 mm | 6825-435 |
| 04 | 40 | 25 mm | 6825-440 |
| 04 | 45 | 25 mm | 6825-445 |
| 04 | 50 | 25 mm | 6825-450 |
| 04 | 55 | 25 mm | 6825-455 |
| 04 | 60 | 25 mm | 6825-460 |
| 06 | 20 | 21 mm | 6821-620 |
| 06 | 20 | 25 mm | 6825-620 |
| 06 | 20 | 31 mm | 6831-620 |
| 06 | 25 | 21 mm | 6821-625 |
| 06 | 25 | 25 mm | 6825-625 |
| 06 | 25 | 31 mm | 6831-625 |
| 06 | 30 | 21 mm | 6821-630 |
| 06 | 30 | 25 mm | 6825-630 |
| 06 | 30 | 31 mm | 6831-630 |
| 06 | 40 | 25 mm | 6825-640 |
| 06 | 40 | 31 mm | 6831-640 |
| 08 | 35 | 19 mm | 6819-835 |



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