

EndoSequence File: Instructions for Use

The EndoSequence file product assortment:

File Name/Type	Tip Size	Length			Taper	
		21mm	25mm	31mm	04	06
Rotary Packs						
Expeditor™	27	X			X	
(4/Pack)	15	X	X	X	X	X
	20	X	X	X	X	X
	25	X	X	X	X	X
	30	X	X	X	X	X
	35	X	X	X	X	X
	45	X	X	X	X	X
	50	X	X	X	X	X
	55	X	X	X	X	
	60	X	X	X	X	
	70	X	X	X	X	
	80	X	X	X	X	
Rotary Asst.						
X-small/small	30-25-20-15	X	X	X	X	X
Medium	40-35-30-25	X	X	X	X	X
Large	50-45-40-35	X	X	X	X	X
X-Large	80-70-60-55	X	X	X	X	

EndoSequence Technique

The EndoSequence file technique is based upon the concept of using an Expeditor™ file, choosing the size (small, medium, large) of the canal and using the corresponding EndoSequence file package containing the four files necessary to properly shape the canal. Generally, canal preparation will require only three files, but we have included in each assorted pack a fourth file size for the more challenging cases.

Using a #10 EndoSequence hand file, establish coronal patency.

1. Expeditor™

NOTE: The EndoSequence Expeditor™ File is the first rotary file placed into the canal after coronal patency has been confirmed/established. The purpose of the unique Expeditor™, is to assist in determining the approximate size of the canal, and thus which treatment package of EndoSequence files should be opened. Additionally, the Expeditor™ can be used to create coronal channeling that can further expedite the instrumentation process.

Upon entering the canal with the Expeditor™, take the file down into the canal until engagement is encountered. (i.e., when the file first makes contact with the canal walls). Having met engagement with the Expeditor™, remove the file from the canal and subsequently choose which package of files to open. This decision is based upon information gleaned from the pre-operative x-ray, the resistance of the #10 hand file, and the depth of penetration of the Expeditor™ as follows:

- If the Expeditor™ meets engagement at less than half of it's cutting length, a small canal is indicated.

- If the Expeditor™ meets engagement at half or more of it's cutting length, a medium canal is indicated.

- If the Expeditor™ penetrates to its entire length loosely, a large canal is indicated.

Once the canal size is determined, you simply pick the appropriate pack of files (X-small/small, Medium, Large).

2. Instrumentation

- Confirm coronal patency with a #10 stainless steel hand file. This will facilitate the use of the first rotary file. The hand file used only needs to go to approximately one-half (1/2) the projected working length. If a canal is patent in the coronal third, it normally will be open to the apex.

- Begin the crown down process with a file from the appropriate size package as determined by the depth of the Expeditor™.

NOTE: You will notice that the EndoSequence rotary files, due to their unique Alternating Contact Point design, exhibit a subtle "clicking" sound in the canal. This is normal and additional evidence that you are engaged in instrumenting the canal.

When you are over-engaging (forcing) any EndoSequence file, the "clicking" sound will become distinctly more pronounced.

- Following the second rotary file that has been worked in the canal, establish working length using a #10 hand file and an apex locator. Always determine working length after the second rotary file to take advantage of the crown down technique.

- Complete rotary preparation in a crown down fashion, taking each file to engagement. The first EndoSequence file to length, with engagement, completes the preparation. An alternative is to finish the preparation one size larger than the first rotary file to length with engagement.

NOTE: If you must crown down all the way to the #15, we recommend that you loop back with a #20 EndoSequence file and take this to length. We do not advocate finishing the preparation with a size smaller than the #20. This applies to both .04 and .06 fully tapered preparations.

3. Obturation

Obturate the canal with the matching EndoSequence Gutta Percha cone and technique of your choice.

EndoSequence for Extra Small Canals

Using a #10 EndoSequence hand file, establish coronal patency.

Establishing patency is extremely important when treating narrow canals. It is also suggested to take a #15 hand file into the canal and create a glide path. This step will facilitate the rotary instrumentation in such canals.

1. Expeditor™

The EndoSequence Expeditor™ File is the first rotary file placed into the canal after coronal patency has been confirmed/established. Advance the Expeditor™ into the canal until engagement is met. Following the use of the Expeditor™, you should open the package of .04 taper files labeled XS/S.

2. Instrumentation

NOTE: You will now begin a **modified crown down** technique as outlined below. This technique is very effective at removing that part of the canal that binds files, resulting in dramatically less stress and resistance on the file.

- Begin the modified crown down preparation by using a #25/.04 EndoSequence file to engagement.
 - Generally, this penetrates the canal about 15 mm.

- Follow the #25 with the #30/.04 EndoSequence file.
 - This file will generally go one to two millimeters less. However, after two files, you have successfully preflared the coronal half of the canal.
- You may now determine your final working length with a #10 stainless steel file and an apex locator.
 - If you wish, you can now create a glide path to the apex with a #10 and/or #15 hand file.
- Following length determination, return to your original #25/.04 file, and use in a normal fashion.
 - This file should now track further down (about 18 mm) into the canal than when previously used (about 15 mm.) above.
- Take the #20/.04 file to engagement.
- Quite often the #20 will reach the final working length. If not, continue the crown down technique with a #15/.04 file. Normally, this will take you to your final working length.
 - If you must crown down all the way to the #15, we recommend that you loop back with a #20/.04 EndoSequence file and take this to length. We do not advocate finishing the preparation with a size smaller than the #20. This applies to both .04 and .06 fully tapered preparations.

3. Obturation

- Obturate the canal with the matching EndoSequence Gutta Percha cone and technique of your choice.

EndoSequence File Technique/Usage Tips

Access

- Close one eye and look into the access cavity. You should be able to view all of the orifices without any obstruction in view. This verifies your straight-line access.

Instrumentation

- Never take any rotary file where a hand file has not previously been.
- Use the EndoSequence file in a single (then back), second (then back), third (then out) motion. (i.e., take the file to engagement and back, to engagement and back, and finally to a third engagement and out of the canal). Each series of engagements should take no more than two (2) to three (3) seconds.
- It is recommended that the clinician perform two (2) series of three (3) engagements each before going to the next file. This will facilitate the instrumentation process and reduce stress on the file.
- The EndoSequence file has been shown to work best in the range of 500-600 RPMs. The ideal speed may vary a little depending upon your personal preference and engine.

- While the modified crown down works extremely well in difficult cases, you can facilitate treatment by performing this technique with EndoSequence .04 taper rotary files in place of our .06 taper instruments.

- When first using the EndoSequence file set the torque setting on your handpiece between 1.8 - 2.3 Ncm² or 183 - 234 g/cm. As you get more comfortable with the technique (light touch) you can increase the torque as you see fit but never exceed 2.9 Ncm² (300g/cm).

- NEVER force a file.

- Always use lubrication with rotary files.

- Always wipe the file after three (3) engagements. The EndoSequence file cuts and accumulates debris extremely efficiently.

- For optimum control, establish a firm finger rest.

- Irrigation should be used at all times and replaced frequently.

- Always keep the file moving while in the canal. It reduces stress on the file.

Single Use Policy: EndoSequence files are recommended for single patient use only. Brasseler USA defines single use as one patient, one tooth.



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