EdgeFile® X-3 Heat Treated Fire-Wire™ NiTi Rotary Files

COMPOSITION
The instrument is made of an Annealed Heat Treated (AHT) nickel-titanium alloy brand named Fire-Wire™. All files are constant tapered.

EdgeFile®X3 Indications for Use
These files are used in Endodontics for the removal of dentin and root canal shaping. They are compatible with the ProTaper® and ProTaper Next® rotary file system and can be used in the same hand piece at the same speed and torque settings.

Contraindications
Like all mechanically driven endodontic instruments they should not be used in cases with very severe and sudden curvatures.

Warnings
- A rubber dam system should be used.
- The rotary files are non-sterile and must be sterilized before patient use.

Precautions
As with all products, use carefully until you become proficient with use. Always determine working length using radiographs and/or apex locator to properly use rotary files.
Important points to remember
1. Use an electric hand piece.
2. Operate rotary files at 300-500 rpm (revolutions per minute).
3. Straight-line access is imperative for proper rotary file use and endodontic treatment.
4. Do not force the files down canals, use minimal apical pressure.
5. Clean the flutes frequently and at least after removing the files from the canal.
6. Irrigate and lubricate frequently the canal throughout the procedure.
7. Take each rotary file to length only one time and for no more than one second.
8. In apical areas and curved canals exercise caution.
9. Rotary files are single patient use devices.
10. When instrumenting the canal, do not over-enlarge the coronal portion of the canal.
11. Too large a file taken to length increases the risk of canal transportation and file separation.
12. **EdgeFile®X3** undergoes our proprietary Annealed Heat Treatment (AHT) forming our branded Fire-Wire™ which increases cyclic fatigue resistance and torque strength. With this proprietary processing, **EdgeFile®X3** files may be slightly curved. This is not a manufacturing defect. While the file can be easily straightened with your fingers, it is not necessary as once they are inside the canal, the **EdgeFile®X3** will follow and conform to the natural canal anatomy and curvatures.

Adverse Reactions
This product contains Nickel and should not be used for individuals with known allergic sensitivity to this metal.

STEP-BY-STEP INSTRUCTIONS

Sterilization
Files must be sterilized before use. ANSI/ADA Specification 28 recommends
- Scrub the instruments with soap and warm water.
- Rinse thoroughly with distilled or deionized water.
- Allow to air dry.
- Place the instruments, unwrapped, in an autoclave tray.
- Use fresh distilled or deionized water.
- Steam Autoclave at 136° C (plus or minus 2° C) for 20 minutes.
- **EdgeFile®X3** rotary files are for single patient use.
- Recommended File Disposal Place used files in a Biohazard Sharps container.

Straight-Line Access and Glide Path Formation
- Prepare straight-line access to all canal orifice.
- With lubrication in the canal form a glide path with a size #10 and #15 hand files or mechanical glide path files 2/3 down the length of the canal.

Safe Unwinding
As a safety feature the files are designed to unwind. They may be used until the files unwind backwards.

Beginning Canal Shaping and Cleaning: N1 and N2 Files
- With lubricant in the canal and with light apical pressure take the N1 (17/06) into the canal and follow the glide path using an in-and-out motion while laterally brushing the dentin on the outstroke to enhance the straight-line access of the canal.
- Continue shaping with the N1 until resistance is met or 2/3 down the canal is reached.
- Then use the N2 (17/04), in the same way until resistance is met or 2/3 down the canal is reached.
- Switch between the N1 and N2 following the glide path using the same in-and-out as described for both files until 2/3 down the canal is reached.
- Now that the coronal 2/3 of the canal is shaped, form a glide path with the size #10 and #15 hand files or mechanical glide path files into the apical 1/3.
- Establish working length with radiographs and/or an apex locator. Then confirm patency by taking the #10 hand file 1 mm past the working length.
- Then, using the same motion as before, switch between the N1 (17/06) and N2 (17/04) until N2 reaches the working length.
- If a larger coronal shape is desired, use the NX (25/12) at any time after the coronal 2/3 is shaped. Completing Canal Shaping and Cleaning: C1, C2, C3, C4 Files
- With lubricant in the canal and with light apical pressure complete canal shaping and cleaning by taking the C1 (20/06) down the canal until the working length is reached.
- Apically gauge the foramen at the working length with a #20 hand file. If the #20 hand file is snug at the working length, the canal is shaped and ready to obturate.
- If the #20 hand file is loose, take the C2 (25/06) to the working length, then gauge with a #25 hand file. When necessary, the C3 (30/06) or C4 (40/06) may need to be used.

Electric Handpiece
See manufacturer specifications.

Obturation of Canal Systems
- When using thermal carrier systems such as **EdgeCore™ X3** or **EdgeFill™ X3**, use size verifiers to determine the proper sized carrier.
- When using a master gutta percha cone that matches the largest file taken to length, remember sometimes you may need to drop down in cone tip size if the corresponding gutta percha to your final rotary file does not go to length.

Speed and Torque
Use the same hand piece with the same speed and torque settings you are currently using with your ProTaper® or ProTaper Next® rotary system. Or if you wish, you can use for all **EdgeFile®X3** rotary files the following speed and torque settings for all files.

Speed	Torque
300-500 rpm	300 g-cm

Reciprocating motors The **EdgeFile®X3** can be used in a clockwise reciprocating motor but not in the WaveOne® reciprocating motor, using the WaveOne® setting, which moves in the counter-clockwise direction. The **EdgeFile®X1** is designed specifically for use in only the WaveOne® reciprocating motor and setting.