

ENDO PULSE ENDO HANDPIECE (EP)

DIRECTIONS FOR USE

Read these instructions to learn how to use the Endo Pulse handpiece (EP) for:

1. Pathfinding 2. Enlarging 3. Removing solid core obtuators 4. Removing gutta percha 5. Removing broken files. (BE SURE TO WATCH THE DVD TOO!)

Endo Technic offers *Stainless Steel* or *Nickel Titanium Master Files™* especially designed for the EP. The *Master Files™* are a combined **pathfinder and enlargement file**. Most of our users prefer the stainless steel files for their sharpness, strength, and economy without the fear of breakage due to the unique movement of the EP.

HANDPIECE SET-UP AND PROPER TACTILE MOVEMENT:

The **Endo Pulse** uses **VERTICAL RECIPROCATION** with 90° free axis movement and **does not rotate!** **Be sure to place the file into the canal before you start the engine!** Since the *Master File™* acts as a hedstrom file, *lean the file against the wall of the canal you wish to cut on.* Work the file in an *upward rasping motion* against opposite walls to form a smooth round or oval canal. Due to the patented design of the *Master Files™*, **the more lean you put into the file the better the cutting action.** *Master Files™* have rounded tips for safety and the files only cut on the upstroke so all debris is removed coronally. *The files only cut where you aim them, not where you don't!*

***Endo Pulse (with Air Motor):** Set air line pressure to 40 psi (use low speed or hi speed lines). Step on the foot pedal. The recommended speed for using the EP is a **medium speed** (or whatever is comfortable in your hand). Full speed may be **too high at first!** The **Endo Pulse Air Motor** will provide **automatic irrigation** or turn off water (on your dental unit) and hand irrigate.

***Endo Pulse E-unit attachment only (for Electric motors):** Attach to your existing E-motor and dial up motor speed to **7k-9k rpm** for our **1:1 Endo Pulse unit** (or whatever is comfortable in your hand). Set your E-motor to **30k-40k** for our **4:1 Endo Pulse unit.** If your motor offers irrigation the **Endo Pulse E-attachment** will deliver it directly into canal or you can hand irrigate.

PATHFINDING:

Begin your procedure with gaining access to the canal. We recommend a Gates Glidden drill or Peeso Reamer to open the orifice several millimeters. Next, gain working length (WL) with a hand file or the **EP in tight canals.** ***Note; The EP has a tactile sensation of pulling you into the canal. This is natural and do not be concerned.*** The *Master Files™* will always follow the path of least resistance and stay centered in the canal. **Do not force the EP apically!** (Continued)

Depress the auto chuck and insert the same size **Master File™** as your Hand file. Place the file into the canal until resistance is met (**pull back 1mm**). Start the engine (use a **medium speed**) and slowly **work the file against opposite walls until the file is very loose (use a paint stroke movement)**. *Note; Be sure to report your guesstimate length with a rubber stopper on the files.* Use the **integrated irrigation system of the EP** while filing or you may turn off the water and hand irrigate. You are now ready to enlarge.

ENLARGEMENT & “HYBRID” TECHNIQUE:

The enlargement technique of the EP is the same as by hand but much faster and easier. You may use the EP alone or in a **“Hybrid Technique”** with a Rotary handpiece. Continue in a *Step-back* fashion from your smallest **Master File™** to the largest you wish to finish with (**do the same filing motion as in pathfinding**). *Note; When using stainless steel Master Files (#20 +) in a curved canal, be sure to **prebend the file** to match the curvature of the canal. Nickel Titanium Master Files may be used as they are. It is always recommended you use a #15 hand recapitulation file to check patency (**Try our patented Hand Master Files™**). Be sure to irrigate using the EP or by hand. The EP will produce a clean, smooth finish to the canal. The EP, due to its cutting action, respects the natural anatomy of any canal. You never need worry about *strip-perfing the furcation zone*. You are now ready to obturate **OR you may put a ROUNDER FINISH IN THE CANAL USING A ROTARY HANDPIECE. DO NOT USE EXCESS ROTARY FILES! THEY ARE EXPENSIVE! MASTER FILES SAVE YOU \$\$\$!***

REMOVAL OF THERMAFILL & SOLID CORE OBTURATORS:

Syringe in chloroform to soften GP mass. Select a **Master File™** according to canal space offered (#15, 20) and place into GP. Start engine and work the file into and around the obturator. **A little apical pressure to guide the file is OK.** Add more chloroform as needed and continue filing until carrier is loosened and pulls out or can be removed with pliers.

GUTTA-PERCHA REMOVAL:

First, work a small (#10 or #15) hand file a few mm into canal. Syringe in chloroform for softening of the GP. Insert the same size **Master File™** in the EP and work it down the canal using regular pumping motion against and around the GP. Since the files cut on the upstroke, the GP should come right out and the canal morphology respected. *Note: See the Journal of Endodontics article: Vol. 15, No. 9, September 1989.*

REMOVING FRACTURED FILES:

In many cases the EP will help you remove (.02 taper) broken files. Larger, (.04+) files are usually difficult but occasionally may be bypassed using the EP. Use the irrigation of the EP when attempting removal. Insert a **Master File™** (one size smaller than the fractured file) into the EP. Use a **medium speed** on the foot pedal and let the file work its way around the fracture. The water will float up the fracture and the vibration of the file should help to grab and bring it up to a retrieval point. *Note; See the Journal of Endodontics article: Vol. 16, No. 12, December 1990.*

(Please refer any questions to: ENDO TECHNIC, toll free at 1-877-477-8899.)