

# Technique guide for Root canal instrumentation with LSX

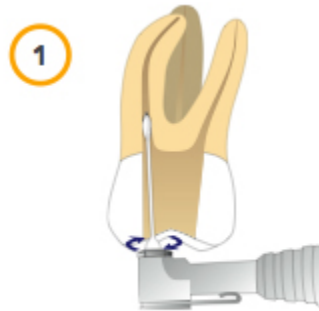
Important points are highlighted in Red color

## Step 1: Access, Flaring, Working **Length**, Canal Patency

Gain access to the pulp chamber with a pear shaped diamond or carbide bur. Use a K file to explore the root canals, to whatever depth it goes without binding,

LSX is **not** an instrument for coronal third instrumentation. Do coronal flaring with the instrument of your choice. Here is one method to achieve straight line access, which is very **crucial** for rotary instrumentation.

1. Use **H files** # 15, 20 and 25 to do anti curvature filing.
2. Irrigate and use Gates Glidden drills for the glide path (Fig 1)

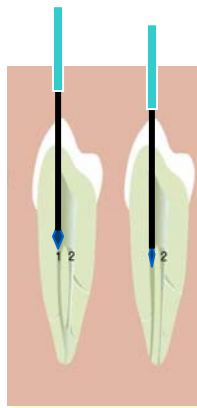


Obtain working length and Irrigate.

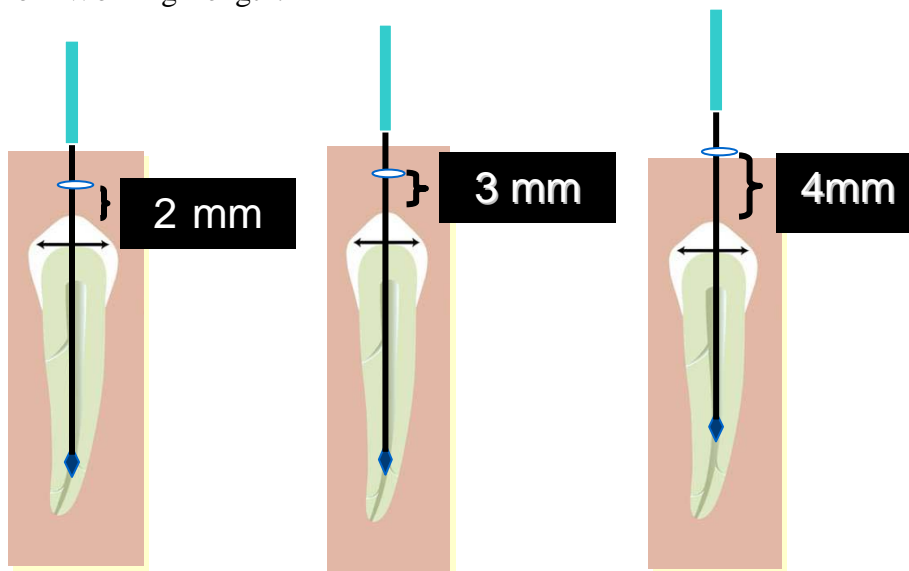
## Step 2: Instrument the Apical Part of the Canal and Determine Working **Width**

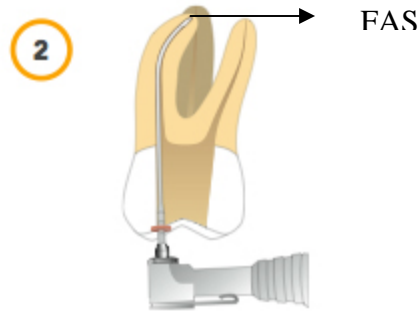
1. Instrument the root canal with **K files** # 15, 20, & 25. Do reaming first, then filing till the file is **loose** in the canal, irrigate after each instrument.
2. Flood the canal with EDTA (17% **Solution**). Start using LSX Rotary Instruments for apical instrumentation. Attach # 20 LSX instrument to the EndoPal handpiece and **then** adjust the WL
3. When the handpiece is **not** running, insert the tip of LSX into the canal orifice about 2 to 3 mm and **then** start the handpiece
4. See that the LSX is held in a straight position ( Importance of straight-line access)
5. **SLOWLY, steadily** advance the instrument to the WL, and take it out. Don't stay in the canal **unduly**.
6. Change to the next size LSX. First few instruments may **not** do any cutting. There is no need to irrigate between change of LSX **if** the instrument has **not** done any cutting
7. When you advance an instrument and it offers **resistance** before reaching the WL, this instrument will start cutting.

8. When resistance is felt, **briefly pause**, and then proceed to Working Length. This technique is simple:
  - a) Advance to Resistance,
  - b) Pause at Resistance,
  - c) Proceed **SLOWLY**, steadily to Working Length.
9. If you hear **chatter** while advancing the LSX apically, **pause** for a while, let the instrument work on the area, and then **SLOWLY** advance. If you advance the LSX rapidly while there is chatter, it may separate or twist up.
  - 1) Chatter noise indicates present of septum. If there is a septum, the instrument **can** go deeper because of the spade shape, but it will put a lot of strain while bring out and may separate the instrument
  - 2) If there is a sharp curvature, strain on the instrument can lead to separation



10. Your Final Apical Size (**FAS**) is the instrument that encounters resistance 4mm (or more) from Working Length.





### Step 3: Instrument the Apical and Middle third

Once you have reached the FAS, start stepping back by 2mm with the next larger instrument.

We have to now deal with the apical and middle thirds of the canal, which is on an average 4+4 mms. That means you have to work with the next 4 larger LSXs, each stepping back by 2mm from the previous one.

This stepping back is done to create an .02 taper, to facilitate obturation with .02 taper gutta percha. LSX is a non tapered instrument, so taper has to be created by stepping back with larger instruments. Irrigate, clear the canal thoroughly.

NOTE: If you are using SimpliFill then you need to step back from WL minus 4mm.

### Step 4: Recapitulate

Using the FAS rotating in the handpiece, recapitulate to Working Length.

### Step 5: 13. Final irrigation.

Irrigate with NaOCL, then EDTA, then NaOCL again to clear the dentinal tubules. Finally, irrigate with Chlorhexidine.

The canal is now ready for obturation.

For updates and latest in rotary endo keep visiting [www.healthmantra.com/rotary/](http://www.healthmantra.com/rotary/)

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