

**LIBERATOR™**

by Miltex

NITI ENDODONTIC FILES

**CROWN-DOWN TECHNIQUE**

Developed by Dr. James B. Roane

**ROANE GATES GLIDDEN (RGG) DRILLS**

After initial access, explore canal with a small hand file to estimate the working length, then begin using the Liberator RGGs #1-3 in succession, irrigating between each size.

**Files speed must be at least 1,000 to 2,000 RPM.**

**1. RGG #1  
118/08 (tip/taper)**

Advance file into canal 1 to 3 mm from the point of first contact. (1 mm in small canals)

**2. RGG #2  
94/08 (tip/taper)**

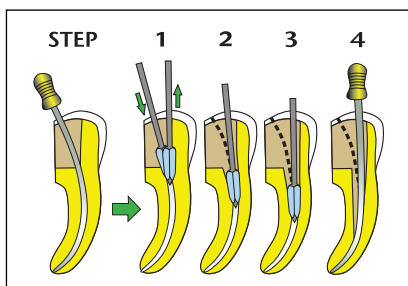
Advance 3 mm beyond the previous depth.

**3. RGG #3  
70/08 (tip/taper)**

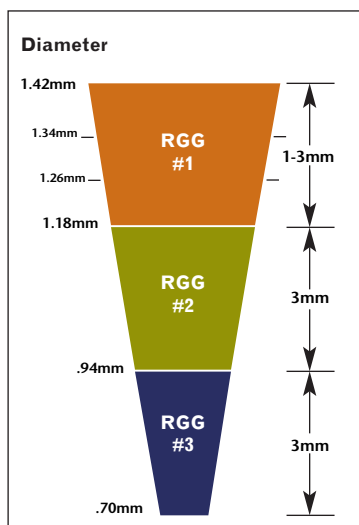
Advance 3 mm beyond the previous depth. (The tip should remain 5 mm short of the WL in small canals.)

**4. 25 Flex-R®.**

Check patency using size 25 Miltex Flex-R® file.



Molar Access with  
Liberator Coronal Shaper System



Uniform .08 Taper  
with RGG Drills

**TECHNIQUE TIPS**

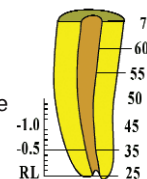
- Confluent canals and sharp apical curvatures may require:
  - Reduced rotational speed
  - If using .04 or .06 taper files, consider going to working length with .02 taper and stepping-back with larger tapers
  - Hand filing
- Be sure to have straight line access to canals
- Operate Liberator files at 1,000 to 2,000 RPM
- Advance each Liberator file slowly, "pecking" not required
- Irrigate between each Liberator file

**STANDARD FILES**

After radicular access, establish canal length using a small Flex-R® or Hi-5™ file, an apex locator and radiographs. Use the corresponding Liberator file according to the root size diagrams below. Irrigate between each file. Use .02 taper instruments in canals with significant curvature. If using .04 or .06 taper instruments and canal advancement is sluggish, then use next smaller taper and continue sequence. **Files should be run at 1,000 to 2,000 RPM.**

**File Tip Size for Small Root Diameter**

- 70 Liberator** Place rotating file into the canal and apply sufficient apical pressure to advance to a depth 5 mm short of working length (WL).
- 60 Liberator** Advance file to a depth 4 mm short of WL.
- 55 Liberator** Advance file to a depth 3 mm short of WL.
- 50 Liberator** Advance file to a depth 2 mm short of WL.
- 45 Liberator** Advance file to a depth 1 mm short of the foramen.
- 35 Liberator** Advance file to a depth 0.5 mm short of the foramen.
- 25 Liberator** Advance file to a depth slightly beyond the foramen. (A pre-curved Flex-R may be required to establish patency).

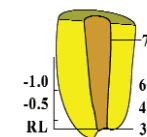


Small

Shaping is complete. Irrigate, dry and fill the canal system.

**File Tip Size for Medium Root Diameter**

- 70 Liberator** Place rotating file into the canal and apply sufficient apical pressure to advance to a depth of 2 mm short of the foramen.
- 60 Liberator** Advance file to a depth 1 mm short of the foramen.
- 45 Liberator** Advance file to a depth 0.5 mm short of the foramen.
- 30 Liberator** Advance file to a depth slightly through the foramen.

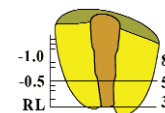


Medium

Shaping is complete. Irrigate, dry and fill the canal system.

**File Tip Size for Large Root Diameter**

- 70 or 80 Liberator** Place rotating file into the canal and apply sufficient apical pressure to advance to a depth 1 mm short of the foramen.
- 55 Liberator** Advance file to a depth 0.5 mm short of the foramen.
- 35 Liberator** Advance file to a depth slightly through the foramen.



Large

Shaping is complete. Irrigate, dry and fill the canal system.

RL = Radiographic Length