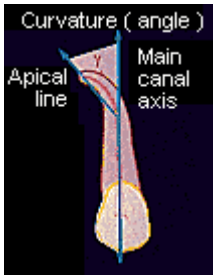


# Hero 642 Guidelines and technique

The HERO 642® is simple, safe, versatile and economic as long as you respect the following instructions.

## Catheterism or first penetration

- Its purpose is to open the first passage and control the depth and working length (WL).
- It can be done with conventional hand instruments of the practitioner's choice.
- In easy or average canals, a file No. 10 or 15 will often be enough to penetrate the canal and check the depth.
- In difficult canals, it can be done after using a .06 HERO taper with the benefit of a wider access in the coronal area.

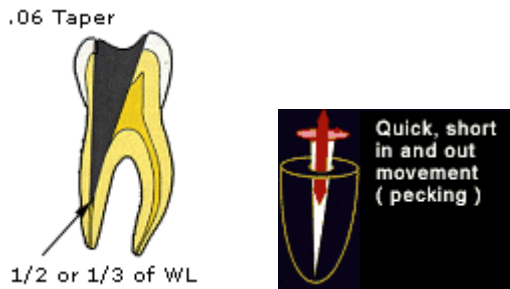


## Canal Enlargement or the "crown-down" technique

Canals are classified as easy, average or difficult, according to S.W. Schneider's curvature criteria (cf. "A comparison of canal preparation in straight and curved canals", Oral Surgery, 1971 ; 32(2) : 271-275) and how hard their penetration can be.

- **Easy canals : straight and curved < 5°**
- **Canals of average difficulty : curved > 10° and < 25°**
- **Difficult canals : curved > 25°**

## Easy canals / Blue sequence



## .06 TAPER:

- Open pulp chamber, locate and explore orifice opening, determine working length (WL) by using conventional methods.
- Place a .06 taper No 30 HERO in the selected reducing contra-angle.
- Adjust the (black) rubber stop to correspond to 1/2 or 2/3 of the WL. Choose a rotation speed between 300 and 600 rpm end keep it constant.
- Insert the instrument while rotating.
- Proceed apically in a short in and out movement.
- With normal pressure, as if writing with a sharp pencil.
- Penetrate the canal until you reach 1/2. or 2/3 of its depth.

*Frequent and abundant irrigation is recommended for best evacuation of debris.*

*In some difficult cases, canal depth can be measured at this stag : debridement of the coronal half makes penetration of the apical third easier.*

#### **.04 TAPER:**

- Change to a .04 taper No 30 HERO.
- Adjust the (grey) rubber stop at WL minus 2 mm.
- Use the same constant rotation speed.
- Proceed the same way as before until WL minus 2 mm.  
And combine with a circumferential filing.

.04 Taper



*Irrigate frequently and abundantly. In presence of difficulty (in particular when resistance is met), recapitulate with a hand file to control access and depth.*

.02 Taper



#### **.02 TAPER:**

- Change to .02 taper No 30 HERO.
- Adjust the (white) rubber stop at WL.
- Use the same constant rotation speed.
- Proceed with the same quick pumping movement until WL.
- Without excessive pressure.
- And combine with a circumferential filing.

*In the case of an easy canal, 3 instruments are used (= blue sequence, or HERO 642® No 30). Irrigate and dry the canal for obturation*

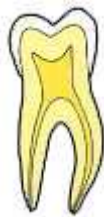
**A. Easy canals**  
(straight - curves < 5°) BLUE SEQUENCE

diameter	6%	4%	2%
N. 30	1/2 - 2/3 WL	WL minus 2 mm	WL

**WL = Working Length**

**Canals with average difficulty / Red sequence**

- The "crown-down" method remains the same.
- Begin with the instruments N° 25 and follow the red sequence.
- Use 5 instruments.



**B. Canals with average difficulty**  
(curves > 10° and < 25°) RED SEQUENCE

diameter	6%	4%	2%
N. 25	1/2 - 2/3 WL	WL minus 2 mm	WL
N. 30		WL minus X	WL

X = maximum depth, as close to 2 mm as possible

**Difficult canals. Yellow sequence**



**C. Difficult canals**  
(curves > 25°) YELLOW SEQUENCE

diameter	6%	4%	2%
N. 20	1/2 - 2/3 WL	WL minus 2 mm	WL
N. 25		WL minus X	WL
N. 30			WL