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The K3 Rotary Nickel Titanium Instrument System

Richard E. Mounce

THE K3 SYSTEM FEATURES

Introduced in January 2002 in North America, the K3 was designed by Dr. John McSpadden (Lookout Mountain, GA). The system has:

1) Canal shaping files which are available with a fixed taper of .02, .04 or .06. The .02 tapered K3 files are available in 15-45 tip sizes and 21, 25 and 30mm lengths, the .04 and .06 tapered K3 files are available in 15-60 tip sizes and 21, 25 and 30 mm lengths
2) A slightly positive rake angle (Fig. 21.1)
3) A variable core diameter (Fig. 21.2)
4) Three radial lands with a relief behind two of the three (Fig. 21.3)
5) Asymmetrically placed radial lands as well as unequal land widths, flute widths and flute depths (Fig. 21.4)
6) An "Axxess" handle design, which shortens the file handle by approximately 5 mm without affecting the working length of the file (Fig. 21.5)
7) A variable flute pitch (Fig. 21.6)
8) A color-coding to distinguish between different tip sizes and tapers (Fig. 21.7)
9) A safe ended cutting tip (Fig. 21.8)
10) K3 Enhanced Taper Body Shaping (ETBS) files have recently been introduced with an enhanced taper of .08, .10, and .12. The ETBS can act as canal shaping files, orifice openers and deep body

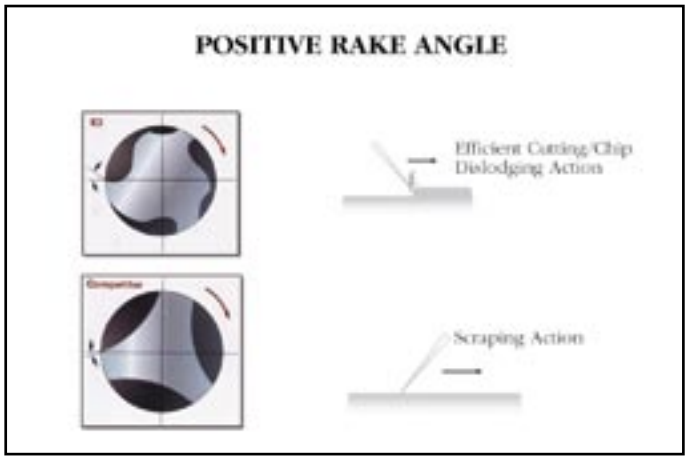

Fig. 21.1. The K3 has a positive rake angle providing an effective cutting blade.

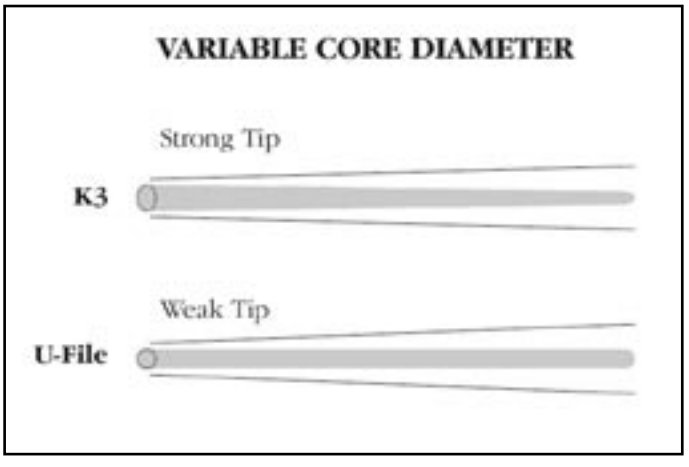

Fig. 21.2. The K3 has a variable core diameter to increase flexibility over its cutting length.

Fig. 21.3. The K3 has a series of three radial lands when viewed in cross section, with relief behind two of the lands. The feature reduces friction on the canal wall and prevents overengagement and helps keep the file centered.

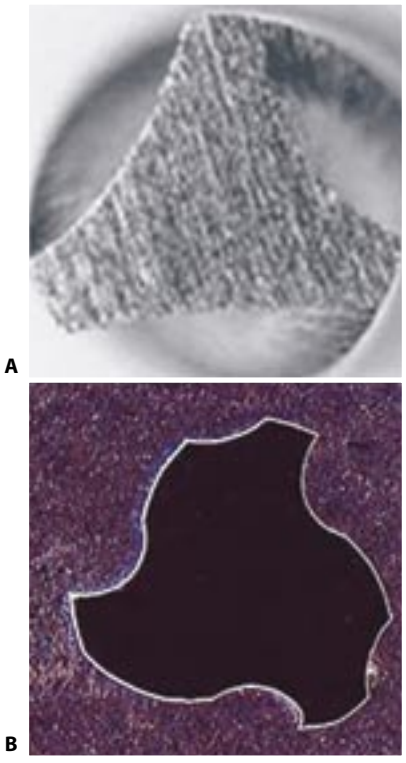

Fig. 21.4. The K3 has asymmetrically placed radial lands of unequal width, unequal flute widths and depths preventing the file from acting like a screw. U shaped files are symmetrical promoting such a "screwing in" which risks separation.

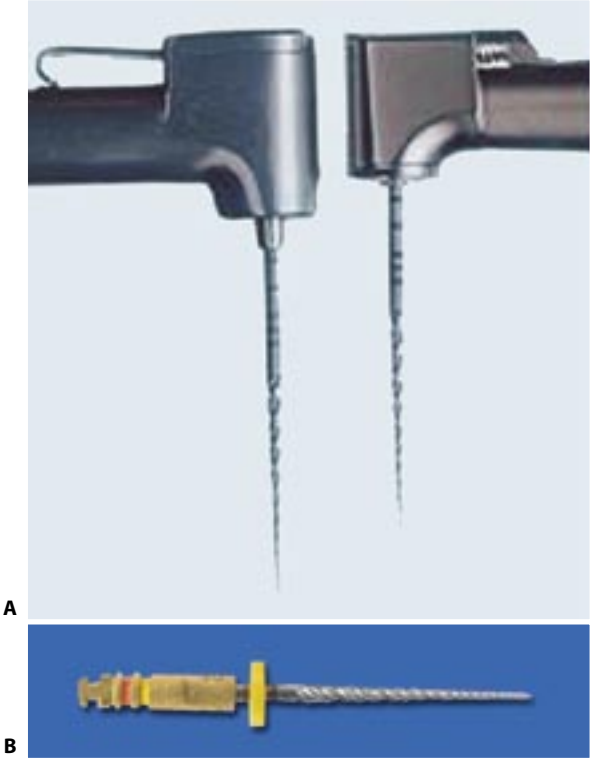

Fig. Fig. 21.5. The K3 has an "Axxess" handle design shortening the file handle by 5 mm leaving the working length of the file identical.

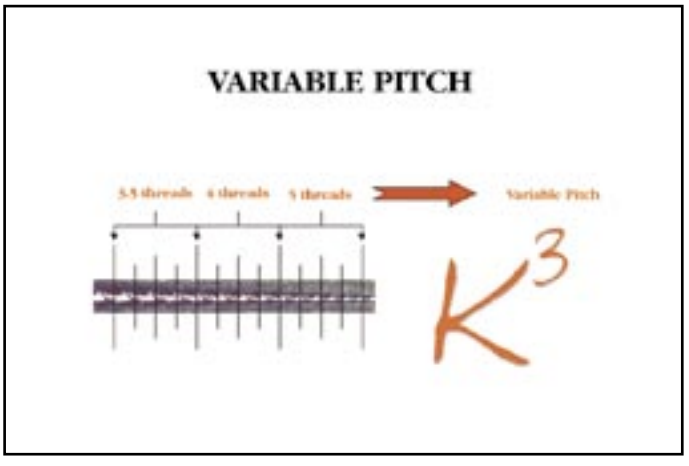

Fig. 21.6. The K3 has a variable flute pitch again to resist the "screwing in" of the file.