META BIOMED: Envision the future

Since its establishment in 1990, META BIOMED has earned a reputation for being one of the dental industry’s leading technological innovators. A strong emphasis on research and development has led to breakthroughs in dental materials, equipment and biomaterials. This trend continues with two of its latest products: the i-ROOT electronic apex locator and the E&Q Master cordless gutta-percha obturator. Another product will soon be released.

i-ROOT offers unparalleled accuracy in the measurement of apical constrictions. Using dual frequency, i-ROOT is the fifth-generation apex locator from META BIOMED. It is able to measure accurately regardless of the root canal’s condition—whether it is dry, wet or bleeding, or in the presence of a saline solution, EDTA, NaOCl or chlorhexidine. The device has a colored display that allows for greater detail, with audio measurement. Developed and upgraded with the technology of the e-Magic Finder (EMF-100 series) apex locator, it is simple to operate. The locator is powered by three AA batteries and provides up to 60 hours of continuous use. Weighing only 390 g, i-ROOT is the ideal portable, durable and user-friendly apex locator.

The E&Q Master is designed to be user-friendly in every aspect. Its slim design with a firm grip allows for easy handling, and its simple method of operation can be learned quickly. The obturator runs at a low voltage, making it safe to use, and it is able to perform continuously for 90 minutes. Its lithium-ion battery charges within 3 hours in a similar manner to a mobile phone. The thermo-plasticized method of filling the canal allows the device to provide fast treatment, as it is ready for use within 2 minutes. Finally, META BIOMED is proud to announce another new system for continuous wave obturation that will soon be released internationally: the EQ-V obturation gun and pen combine simple use, chemically proven housing material, outstanding heating performance, extended battery time, and ergonomic design. Among other features, the gun’s innovative 360 degree rotating cartridge needle provides dental professionals with the best choice for obturation. “Both disposable and reusable cartridges will be available, so doctors can easily apply the technique for 3-D obturation. Thanks to EQ-V, all levels and ages of dentists will enjoy root canal filling with great success. We ultimately target to replace conventional techniques with our low-cost cartridge solutions,” says Ian Yun, Managing Director at META BIOMED Inc.

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The new XP-endo Shaper, developed by Swiss dental manufacturer FKG Dentaire, is an innovative single-file system indicated for shaping the vast majority of root canals in three dimensions.

Providing ease of use, swiftness, effectiveness and resistance to cyclic fatigue, the XP-endo Shaper is designed to facilitate the clinicians’ work while maximising endodontic treatment quality and safety. Manufactured from the patented MaxWire alloy, it features extreme flexibility and remarkable fatigue strength, compared with competing instruments that achieve the same final size. It has the capacity to expand, from its initial 0.01 taper to a minimum taper of 0.04, and the ability to progress with agility along the canal, reducing the risk of torsional fatigue. Featuring the Booster Tip, which has six cutting edges, the XP-endo Shaper starts shaping at ISO diameter 15 and then increases its working scope to achieve ISO diameter 30. The Booster Tip keeps the instrument centred and avoids ledging or straightening of the root canal. Owing to the instrument’s small core diameter, its cutting efficiency and the stream generated in the irrigation fluid, a large amount of dentine micro-debris is evacuated efficiently. This prevents the risk of debris compaction into canal irregularities and limits the extrusion beyond the apex. Used after preparing a glide path to a minimum ISO 15/02, the XP-endo Shaper can achieve a final canal preparation size of at least ISO 30/04. These technical advantages, combined with high-speed continuous rotation and minimum torque, minimise the stresses exerted on the canal walls and prevent the risk of microcracks. The XP-endo Shaper has a gentle, non-aggressive action and promotes conservative procedures.

With this new instrument, FKG enables general dentists and endodontists to perform root canal shaping simply, quickly, safely and with just one instrument. Available in 21, 25 and 31 mm lengths, the XP-endo Shaper comes in sterile blister packs of six instruments.

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(XP-endo Shaper is a registered trademark of FKG Dentaire.)
Endodontic imaging mode from Planmeca yields detailed images without noise or artefacts

Planmeca has in its offer an imaging mode specially developed for use in endodontics and that is ideal for cases dealing with small anatomical details, such as imaging of the ear. The imaging mode is available for all Planmeca ProMax 3D family units and provides perfect visualisation of even the smallest anatomical details. The program produces extremely high-resolution images with a very small voxel size (only 75 µm). Owing to the intelligent Planmeca AINO noise removal and Planmeca ARA artefact removal algorithms, noise-free and crystal clear images are produced.

Planmeca ARA removes artefacts efficiently
Metal restorations and root fillings in the patient’s mouth can cause shadows and streaks in CBCT images. The intelligent Planmeca ARA Artefact Removal Algorithm removes these artefacts efficiently from Planmeca ProMax 3D images.

Planmeca AINO removes noise from CBCT images
A particularly low radiation dose or small voxel size can cause noise in 3-D X-ray images. The Planmeca AINO Adaptive Image Noise Optimiser is an intelligent noise filter that reduces noise in CBCT images without losing valuable details. The filter improves image quality in the endodontic imaging mode, where noise is inherent due to the extremely small voxel size. It is especially useful when used in accordance with the Planmeca Ultra Low Dose protocol, where noise is induced by the particularly low dose. Planmeca AINO also allows the reduction of exposure values and consequently the radiation dose in all other imaging modes.

The S1 contra-angle handpiece can be connected to an apex locator using the accompanying apex clip. You clean and sterilize the contra-angle handpiece just as you do other instruments.

The S1 System is a single file system with several advantages. Because you only need one instrument, treatment is faster and since the instruments come in a practical sterile Treatment Pack they are ready to use directly from the package which saves even more time so you’ll be able to treat more patients.

Sendoline’s unique S-profile with its double cutting edges is extremely effective in the root canal with the S1 System’s reciprocating motion. The instrument has a non-cutting tip, making it easier to hold it steady in the centre of the root canal. The instruments rotation 180° clockwise and 30° anti-clockwise alternately—and the nickel titanium alloy’s elasticity and flexibility minimize the risk of instrument fracture.

Visit our website for more information.