Optimal handpiece maintenance

No waiting time or stress with the W&H Assistina TWIN system

Offering optimal support of an efficient reprocessing workflow in contemporary dental practices, W&H presents its new automatic handpiece maintenance device, Assistina TWIN. The device boasts a record cycle time of just 10 seconds and a sophisticated dual-chamber system, effectively rendering tedious waiting times during the maintenance process a thing of the past.

For the practice team, this translates not only to stress-free working but also to optimal support as far as efficient time management is concerned. Together with a simple operating concept, the ergonomically arranged instrument ports also offer additional convenience. Furthermore, an enhanced method of oil application and the use of a HEPA (high-efficiency particulate air) filter provide short cycle times, high cost-efficiency and improved reliability.

Running smoothly

According to the company, instrument servicing with the Assistina TWIN makes maintenance as effortless as possible for the dental team. While the first instrument is being serviced in the closed chamber, the user can already start connecting the next one in the second chamber. The device thus promotes a continuous workflow—without any waiting time and entirely free from stress. The ease of operation of the W&H device, requiring just the push of a button to start the maintenance process, is yet another highlight.

Furthermore, the dental professional is given the option of using any adaptor. This means that the new handpiece maintenance solution can easily be adapted to the particular requirements of the practice.

Record cycle time thanks to oil nebulisation

A particular highlight of the Assistina TWIN is the device's short service cycle time. During servicing, the spray channels are flushed with cleaning solution and dried with compressed air, and all gearing components are lubricated perfectly with W&H service oil. With this all-round maintenance concept, the Assistina TWIN makes a valuable contribution to the continued good functioning of instruments and helps to extend their lifetimes.

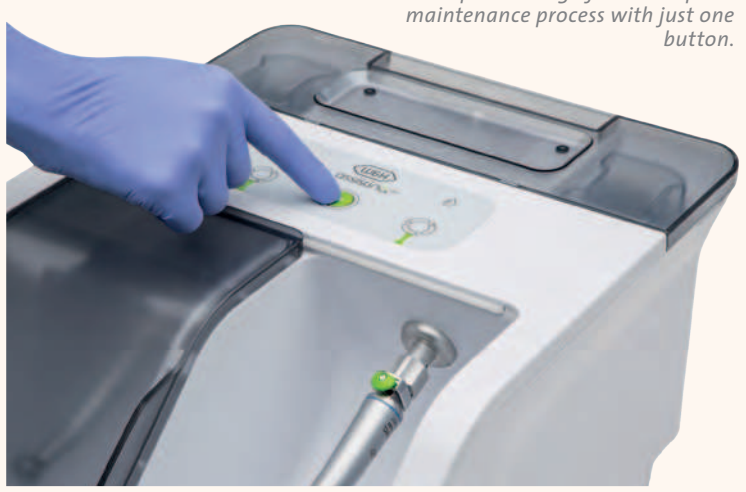
W&H's innovative oil nebulisation technology guarantees the Assistina TWIN's record processing time. The oil is first nebulised before being blasted through the instrument at high pressure. The fine mist produced reaches even the most remote parts without any need for the gearing components to be set in motion first. This makes it possible to remove debris and dirt from the instrument completely and efficiently. Equipped with a state-of-the-art process monitoring system, the device checks that the exact quantity of oil required for each instrument is applied, ensuring uniform and optimal handpiece maintenance results.

The device's HEPA filter removes bacteria, viruses, dusts, aerosols and smoke particles, among others, from the air, and thus also offers optimal safety in its use. Aerosol mists that form during the maintenance process are captured by a fan and filtered out, ensuring the practice team of a safe working environment in the course of the hygienic reprocessing.

Efficient, sustainable and ergonomic

Specially designed to the requirements of dental practices focusing on cost reduction through improved performance, the Assistina TWIN optimises oil consumption and the cycle time during the service process. As such, it is a particularly cost-effective solution that also helps to save resources.

All of the device consumables, such as cartridges and HEPA filters, are offered in the new Assistina TWIN Care Set and can be replaced by the user without any tools. More information can be found at www.wh.com.



Simple starting of the handpiece maintenance process with just one button.

China accelerates registration process for foreign drugs and medical devices

BEIJING, China: The Chinese State Council has announced its facilitation and expediting of the approval process for overseas pharmaceuticals and medical device manufacturers seeking to enter the Chinese market. The measures are part of efforts to lower research and development costs and reduce delays for new medical products entering the domestic market.

As reported by the *Global Times*, one of the changes announced in October is that foreign clinical trial data obtained from overseas centres can now be used in registration applications—as long as the trials comply with Chinese pharmaceutical and medical device registration requirements.

"Previously, clinical trial data carried out overseas was not accepted in China. Thus, international drug makers had to repeat the trials if they wanted to bring new drugs and medical devices into the Chinese market, which could take several years," explained Yingtao Wang, head of the Beijing representative office for Germany-based dental material manufacturer DMG.

According to Lifeng Wang, a representative of the China Food and Drug Administration, the accelerated procedure will reduce repetitive trials and thereby significantly improve efficiency in domestic registration. As a result of the expedited process, approvals for new treatment will be cut by several years and the latest products and devices will likely be available without delays, benefitting medical professionals and patients alike. In addition, prices of pharmaceuticals and medical devices from overseas are expected to fall.

The current market approval procedure has been insufficient in supporting scientific innovation, resulting in the Chinese market lagging behind global advancements, the State Council said in a statement. The changes thus ought to boost the domestic pharmaceutical industry by adjusting the industrial structure, encouraging innovation and making Chinese pharmaceutical manufacturers more competitive.

To ensure data accuracy in the new process, the authorities are expected to strengthen supervision of foreign clinical tests through efforts such as setting up an overseas clinical trial examination system, among other measures.

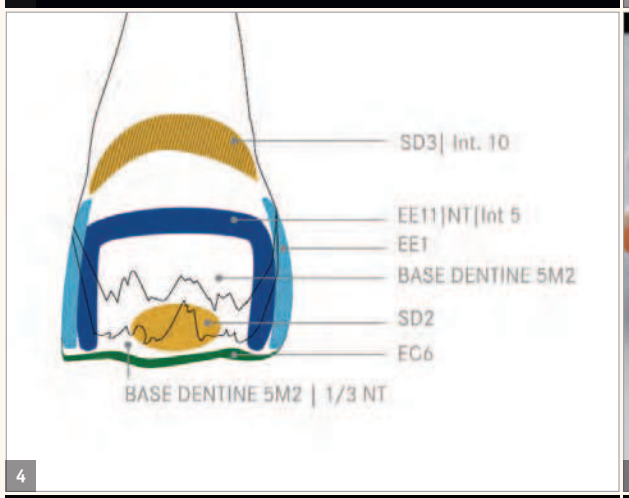
Age-appropriate aesthetics

Creating natural effects with VITA VM materials


1


2


3



4


5


6


7


8


9

*Fig. 1: Initial situation: Composite restoration of tooth #21 after distal transverse fracture of the tooth crown.—**Fig. 2:** After matching the wax-up with the master model, the functional crown was designed.—**Fig. 3:** The crown framework, prepared for veneering.—**Fig. 4:** After determining the basic tooth shade of 5M2 with the VITA Toothguide 3D-MASTER (VITA Zahnfabrik), the layering scheme was sketched.—**Fig. 5:** After a dentine firing, VITA INTERNO can be used for a second time to give depth with individual shade nuances.—**Fig. 6:** The VITA INTERNO stains allow for a multifaceted and age-appropriate reproduction of the natural teeth.—**Fig. 7:** The patient was very satisfied with the final aesthetic result.—**Fig. 8:** The shading and lighting of the restoration fitted in perfectly with the overall picture.—**Fig. 9:** The final full-ceramic crown had an age-appropriate morphology, surface texture and shading.*

By Carolin Wehning, Germany

For dental technicians, it is especially challenging to produce natural-looking, age-appropriate reconstructions in the visible area of the mouth in older people. It is recommended to follow a systematic procedure based on the characteristics of the natural teeth for the individualisation and characterisation of such a restoration. This is the only way results can be achieved that blend harmoniously with the remaining dentition. In this case study, I show how such a complex case can be solved with VITA VM 9 veneering ceramics and VITA INTERNO materials (both VITA Zahnfabrik) for internal characterisation.

Assessment and planning

A 77-year-old patient presented to the dental practice after a coronal transverse fracture of tooth #21 that had already been treated with a direct composite. Clinically, the results were morphologically and aesthetically inadequate **(Fig. 1)**. On the adjacent natural tooth (#11), age-related discolorations, initial white and brown spot lesions in the cervical area, and a vestibular transverse dark-brown crack were apparent. The dentist and patient decided on restoration of the tooth with a full-ceramic crown for long-term stabilisation, on which the colour effect of tooth #11 was to be reproduced in detail. In order to achieve a predictable result, the situation was moulded and a model was developed for a wax-up. Tooth #21 was prepared for a full crown and a master model was produced using a precision mould **(Fig. 2)**.

CAD/CAM fabrication and veneering

The crown framework was made of CAD/CAM-supported VITA YZ HT zirconium dioxide **(Fig. 3)**. For a deep initial fluorescent effect, a wash firing was performed with EFFECT LINER 5 (orange) and EFFECT LINER 6 (green-yellow). Layering with VITA VM 9 was the foundation for reproducing the basic shade **(Fig. 4)**. The VITA INTERNO materials then enabled intensification of the deeper individual shade nuances after the wash and dentine firings **(Figs. 5 & 6)**. Int 04 (orange) and Int 11 (grey-brown) were used in the cervical and interdental areas; Int 05 (terracotta) was used in the centre. The inside areas were nuanced with Int 08 (blue), Int 05 (terracotta) and Int 07 (anthracite), and the incisal edges with Int 02 (sand). Cracks and brown spots were reproduced with Int 10 (brown), and white spots with Int 01 (white).

Finalisation of the restorations

After establishing the basic morphology with a stone and the details with a fine diamond-coated bur, the interior crack was recreated from the outside with a fissure bur to achieve a 3-D effect. The surface texture was kept as smooth as possible, in accordance with the patient's age. After the glaze firing, only a goat hair brush and diamond polishing paste were used to slightly reduce the gloss effect. After trying out the full-ceramic crown, the patient was very satisfied with the result **(Fig. 7)**, and a self-adhesive bonding agent was applied. The shade and form of the restoration integrated harmoniously with the other teeth **(Fig. 8)**. The veneering ceramic, in combination with two stain firings, made it possible to achieve age-appropriate aesthetics **(Fig. 9)**.

Editorial note: This article was first published in Dental Barometer, Issue 6/2017.

***Carolin Wehning** is a dental technician in Bocholt in Germany.*