

Primescan offers accuracy, hygienic safety, great connectivity and easy handling

Full dental arch scan in a little as a minute¹, a high degree of accuracy, easy handling and hygienic safety: Primescan enables high-precision digital impressions with outstanding imagery. Dentsply Sirona Key Opinion Leaders report that working with Primescan offers numerous advantages: It can be used for patient consultation, treatment planning in implant dentistry and orthodontics, and for restorative treatments.

Charlotte/Bensheim, October 12th, 2020. Introduced last year, Dentsply Sirona's Primescan takes the intraoral scanner opens a new chapter of digital dentistry and meets all clinical requirements for an intraoral impression²⁻⁶. With its patented technology, Primescan achieves outstanding results and is fast, accurate and easy to use.

Providing connectivity across multiple digital workflows

Primescan is an ideal starting point for various digital workflows that further improve dental treatment in restorative and implant dentistry as well as orthodontics – from there the dentist can either work with the dental laboratory of choice or with other external partners. After the scan data has been transferred, restorations can be fabricated using CAD/CAM technologies. Thanks to the openness of the system, it does not matter which software and hardware is used by the laboratory.

The modular concept offers a suitable solution for virtually every need within the practice. One possibility is the transfer via the Connect Case Center. The Connect Case Center Inbox enables laboratories around the world to connect to the Connect Case Center. In the process, the validated scan data from Primescan can be received easily for further processing in the desired programs and workflows. The scanned data can be transmitted to a laboratory via the Connect software, and can also be further processed with different software, e.g., for orthodontic or implant treatment planning. Alternatively, the restoration can be planned and manufactured in the practice using the CEREC software 5.

For further processing of the scan, the Connect Case Center provides a link to numerous validated interfaces of important partners in the dental industry. There is a seamless interface, for example, to Simplant, Dentsply Sirona's implant planning service; to Atlantis, design and manufacturing of patient-specific abutments and superstructures for implants; and to Azento, a convenient start-to-finish implant solution for single tooth replacements streamlining planning, purchasing, and delivery and enabling dentists to provide consistently excellent implant treatments. Dr. Daniel Aniol, dentist from Bornheim, Germany: "Especially in the field of implant dentistry, Primescan eases our daily work: a digital impression can be taken for single teeth, quadrants, whole

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About Dentsply Sirona

Dentsply Sirona is the world's largest manufacturer of professional dental products and technologies, with over a century of innovation and service to the dental industry and patients worldwide. Dentsply Sirona develops, manufactures, and markets a comprehensive solutions offering including dental and oral health products as well as other consumable medical devices under a strong portfolio of world class brands. Dentsply Sirona's products provide innovative, high-quality and effective solutions to advance patient care and deliver better and safer dental care. Dentsply Sirona's headquarters is located in Charlotte, North Carolina. The company's shares are listed in the United States on NASDAQ under the symbol XRAY.

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dentition and for edentulous jaws." Dr. Aniol continued, "It is also possible to scan deeper areas up to 20 mm. It makes it very easy to work with different implant systems both pre-implantologically and implant-prosthetic in daily practice. The handling is simple and logically structured regardless of the implant. An important point for me is the extremely high precision of the digital impression with Primescan. It allows both a fully digital surgical guide to be fabricated in the run-up (implant planning), and in the implant-prosthetic phase, a 100% correctly fitting, fully digital prosthetic single-tooth restoration to be fabricated in most cases. Full digital workflow at its best."

With the Connect Case Center the data from the digital impression taken with Primescan is also available for SureSmile via a seamlessly integrated interface. Dr. Antonella Maselli, specialist in orthodontics from Catanzaro, Italy: "Since I am an Orthodontist, the fact that the transfer of the Primescan data to the software SureSmile is very easy and makes the workflow seamless, removing the tedious data passage between platforms, is quite important. With only two clicks I have a clear, high-quality scan in my records. It truly is the best digital workflow I have used in my entire career!"

"By using the Primescan, there is no loss of time for us as a laboratory when passing on orders," explains Ulrich Thielen, master dental technician from Zahntechnik Düsseldorf, Germany. "Distorted impressions are a thing of the past and printed models are often not necessary. But the greatest advantage for us is the high scan quality, which makes it easy to create accurate dental restorations, and working directly with the dentist's Primescan original data without creating a physical working model."

Technical and handling advantages help ensure hygienic safety

The smooth surfaces of Primescan allow quick and easy cleaning and the new acquisition center with touch screen can simply be cleaned by wipe disinfection. Dr. Luciana Sargologos, dentist from São Paulo, Brazil, explains: "Primescan makes it easy to adhere to hygienic safety standards, an important concern for me and my patients. This also includes the well-thought-out 3-sleeve concept consisting of a stainless-steel sleeve, disposable sleeves and the soon to come autoclavable stainless-steel sleeve with a disposable window. With these, all relevant hygienic reprocessing processes can be applied."

The removable stainless-steel sleeve with its scratch-resistant sapphire glass window can be easily cleaned by means of wipe disinfection and then treated in a thermal disinfector at 190 degrees Celsius for twelve minutes. The completely replaceable plastic sleeve (disposable sleeve) is an alternative for maximum hygienic care and elimination of cross-contamination risks. The stainless-steel sleeve with disposable window can be reprocessed in the DAC Universal.

Producing scans with amazing speed

With Primescan, a larger dental surface area can be captured per second, with an entire upper jaw in as little as 30 seconds, and a full jaw scan in as little as a minute¹.

"The patients love the speed of the scanning process, they love to see their teeth on the screen right away, and of course they appreciate the comfortable process," says Dr. Antonella Maselli. "The fact that the process is so quick gives me more time to take care of my patients at a deeper level. I can communicate, listen and establish trust: the key element to a successful treatment."

A scan device that is simple and easy to handle

Primescan offers customers a flexible, intuitive, and very simple scan procedure.

Dr. Takashi Sumi, specialist for implant dentistry from Sumi Dental Office in Aichi, Japan: "Working with Primescan was an enormous step for our practice. I have compared some of the intraoral scanners and to be able to use Primescan along with a Dentsply Sirona implant system was appealing to me," Dr. Sumi continued, "With a large field of view, no significant tilting of the device is required, and it allows an easy and smooth scan even for the last molars. If some data is missing in the scan, you can simply rescan the missing part and the system will automatically add it to the initial scan. Also, it is easy to scan the perimucosal region. Scan data can be uploaded to the Connect Case Center and can immediately be shared with the laboratory which makes our workflow efficient as ever."

High-level accuracy in every digital impression

Primescan produces high-quality images of natural teeth and preparations as well as other materials commonly used in dentistry.

The high-precision Smart Pixel Sensor captures the data at a high resolution and assesses the contrast in each pixel. For every 3-D image, Primescan consolidates more than 50,000 images and captures up to one million 3-D points per second, thereby offering a level of scanning precision that is outstanding. An optical high frequency contrast analysis is used to calculate the 3-D points, resulting in an increased level of accuracy. This is further supported by an optical design that has been optimized for the measuring principle used and by the mechanical robustness of the optics.

"In several studies, Primescan performed exceptionally well receiving particularly high marks for its accuracy²⁻⁶," said Dr. Alexander Völcker, Group Vice President CAD/CAM at Dentsply Sirona. "These studies, but also dentists worldwide confirm: With Primescan, we have created the optimal support for dentists in terms of scan accuracy, connectivity, speed, ease of use and hygiene that they have been waiting for. It

doesn't matter which workflow and application area the clinician chooses: Primescan is the right scanner for all digital needs.”

More information about Primescan is available on the Dentsply Sirona Website: www.dentsplysirona.com/primescan

Notes & References

1. Scan times may vary based on various factors, including experience level of practitioner.
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4. Dutton E, Ludlow M, Mennito A et al. The effect different substrates have on the trueness and precision of eight different intraoral scanners. *J Esthet Restor Dent* 2020;32(2):204-218 (doi: 10.1111/jerd.12528. Epub 2019, Sep 30).
5. Schmidt A, Klusmann L, Wöstmann B, Schlenz MA. Accuracy of Digital and Conventional Full-Arch Impressions in Patients: An Update. *J Clin Med* 2020;9(3):688 (doi: 10.3390/jcm9030688).
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IMAGES

are available for [> Download](#) on the website.



Fig. 1: Primescan achieves outstanding results and is fast, accurate and easy to use.



Fig. 2: Dr. Alexander Völcker, Group Vice President at Dentsply Sirona CAD/CAM: "With Primescan, we have created the optimal support for dentists in terms of hygiene, connectivity and service".



Fig. 3: Dr. Daniel Aniol, dentist from Bornheim, Germany.



Fig. 4: Dr. Luciana Sargologos, dentist from São Paulo, Brazil.



Fig. 5: Ulrich Thielen, master dental technician from Zahntechnik Düsseldorf, Germany.



Fig. 6: Dr. Antonella Maselli, specialist in orthodontics from Catanzaro, Italy.





Fig. 7: Dr. Takashi Sumi, Sumi Dental Office in Aichi, Japan.

