Dentsply Sirona

See more with certainty

Dentsply Sirona Imaging Solutions for Endodontics

dentsplysirona.com

iF DESIGN AWARD 2021

reddot winner 2020

Changing the face of Endodontics

With imaging systems from Dentsply Sirona you can rely on experience that provides you with peace of mind and provides your patients with safe, high-quality care. Dentsply Sirona has been a pioneer in the field of X-rays for more than 120 years, establishing new methods and innovations in the field of imaging – ones that will allow you to face your daily challenges efficiently and in an improved way. True to our motto: The more you see. The more possibilities there are.

The right system for today's endodontic practice. More than X-rays

Pure imaging is no longer enough. Of course, image quality is key when it comes to modern X-ray systems, because the quality of the clinical X-ray data is the basis for a successful diagnosis and treatment plan. Faster, better diagnostics, safety in treatment, better communication with the patient, and efficient, uncomplicated workflows, are all things we have taken into account with our imaging units and benefits that you expect. We pride ourselves on not only providing high-caliber images, but also safe and comfortable patient experiences, basing all of our units on the ALARA principle. We make sure that you get the best possible images at the lowest necessary dose.

Your advantages at a glance

• Outstanding image quality, thanks to the latest technologies
• Intelligent Low Dose exposure for patient benefit and safety
• Efficient, as a result of optimized workflows
• Reliable "Made in Germany" quality
• Future-proof, thanks to a number of upgrade options
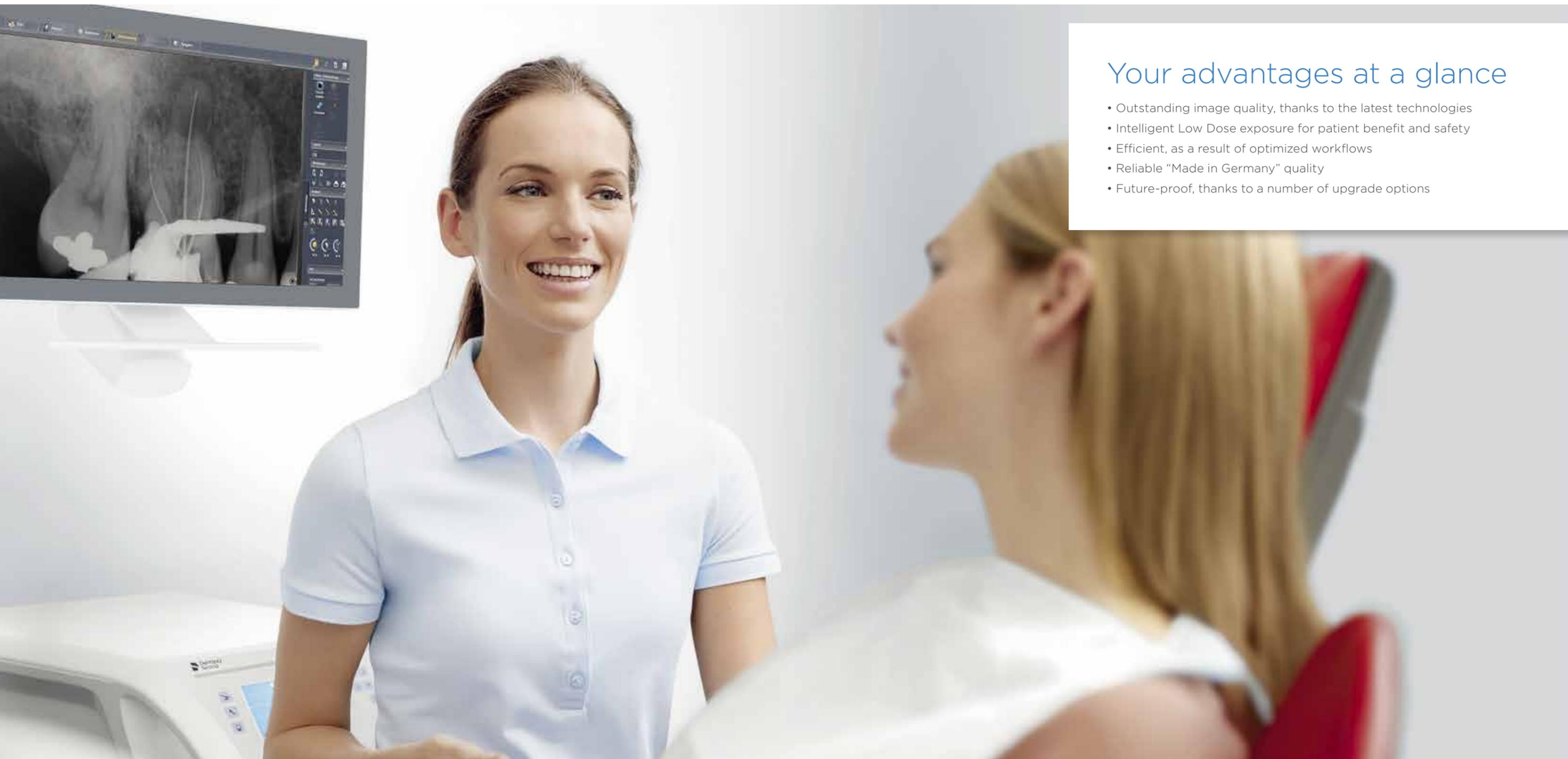
See more:

## Better images, better diagnostic accuracy

Dentsply Sirona imaging devices score points in practices around the world with their innovative technological features and precise images. All programs and recording parameters are adapted to the specific diagnostic tasks and offer you more possibilities for diagnosing.

DCS Technology

Sharpness down to the last detail

The Direct Conversion Sensor (DCS)* has redefined the standard of panoramic imaging. X-rays are directly converted into electrical signals – in contrast to conventional sensors, there is no signal loss due to light conversion. The resulting images are sharp and highly detailed, providing the clinical information you need for an accurate diagnosis.
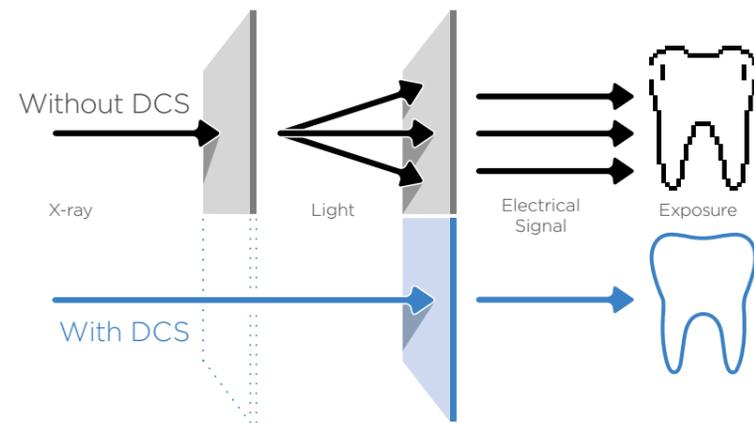

Traditional digital panoramic image   Orthophos SL with DCS

* In Axeos and Orthophos SL.

See behind objects with MARS

Metal artifacts are a challenge in 3D imaging. Radiopaque objects create shadowing and streaking effects during the three-dimensional reconstruction and as a result can often interfere with diagnostics. MARS automatically reduces metal artifacts and facilitates the diagnosis.
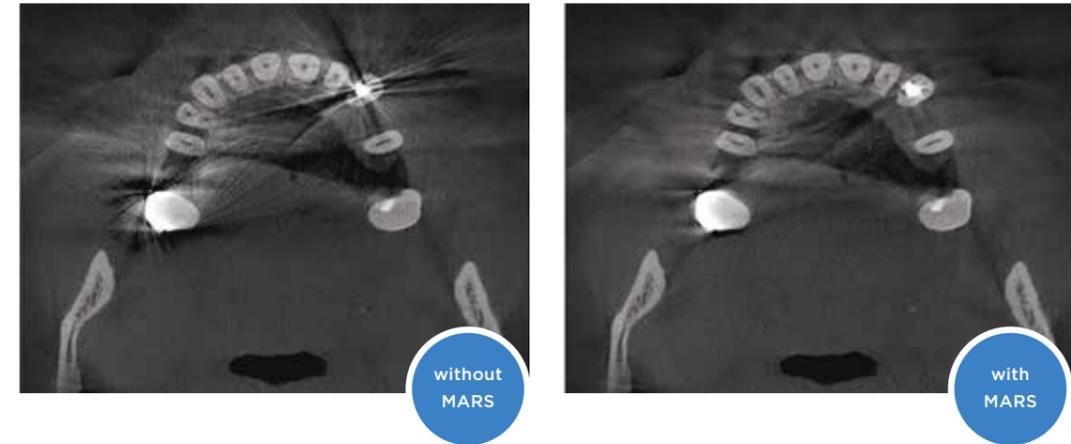

Autofocus - High-quality imaging, fully automatic

See more: To obtain a panoramic X-ray image with a high degree of sharpness the right focus is essential. The jaw must be in the sharp layer during the exposure to ensure a quality final image. To do this, your Dentsply Sirona CBCT (Axeos® or Orthophos®) creates several thousand individual images in a single cycle and automatically recognizes the areas in which the jaw is optimally positioned. These are then displayed in an overall picture with maximum sharpness, removing any additional steps.

Autofocus feature in Axeos and Orthophos SL/S: for sharp images

Axeos and Orthophos SL/S devices focus all areas of the jaw automatically. Fully automatic and without manual intermediate steps. The result: shots with maximum sharpness and clear details.
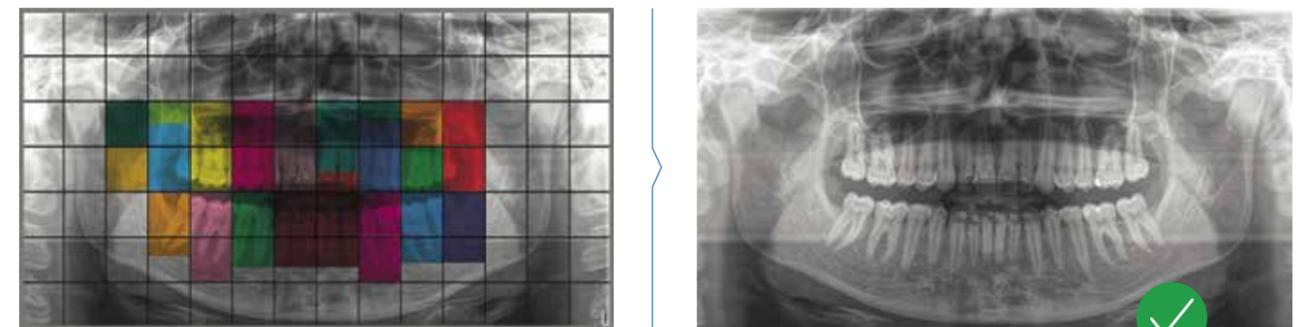
Based on the results of the autofocus, a fully automatic calculated sharp image   The result: images with maximum sharpness
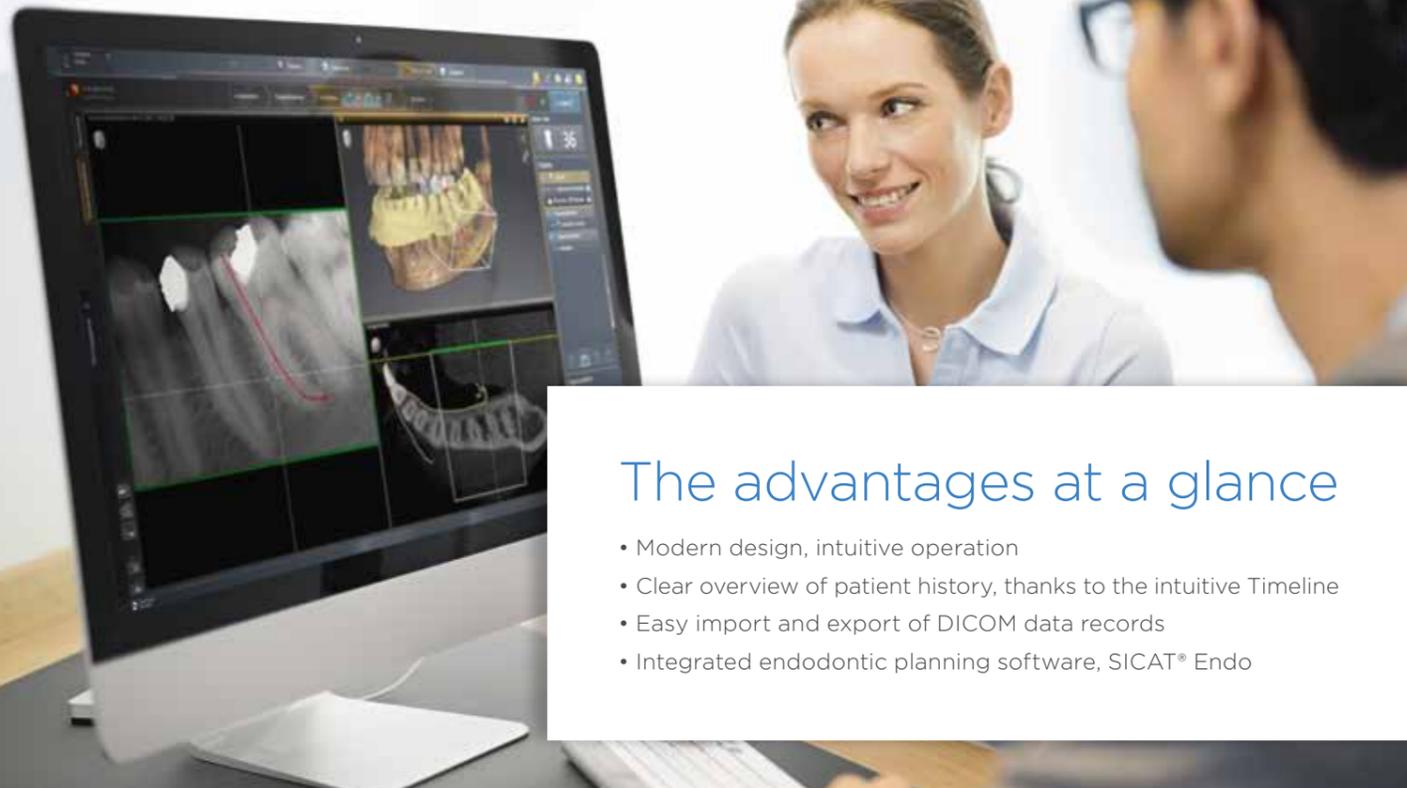
The advantages at a glance

• Modern design, intuitive operation
• Clear overview of patient history, thanks to the intuitive Timeline
• Easy import and export of DICOM data records
• Integrated endodontic planning software, SICAT® Endo

Sidexis iX
3D Imaging to go

For the very first time, you have the ablility to view your 3D X-ray data on an iPad. It has never been so easy to enjoy the advantages of 3D and the flexibility that Sidexis iX provides you.
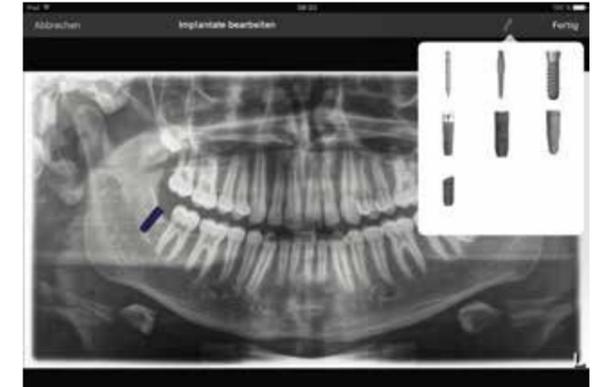
Whether for simple patient communication, checking on patient data while on the move in between treatment rooms or simply for a meeting in the office, Sidexis iX offers you untethered freedom from a single work station and easy access to your patient information. Its easy operation and smooth integration with Sidexis 4 supports an efficient practice workflow. You will connect the Sidexis iX Server to your Sidexis 4 patient database and it will provide the app with the available patient data. The desired data records can then be conveniently transferred to the local app database on the iPad and are then available at need without a direct network connection.

Sidexis® 4

Optimal Workflow with a Clear Structure
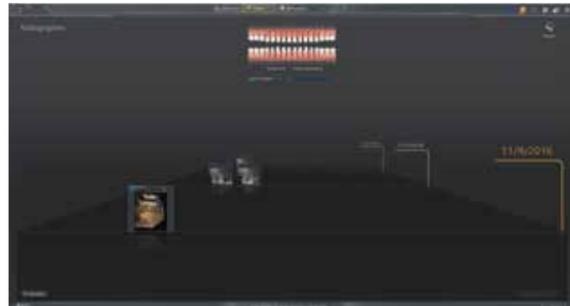
Simple overview of patient history with the Timeline

Even the best imaging system can only show its full potential when it is able to seamlessly integrate into your practice environment and your daily workflows. Our imaging software, Sidexis 4, is the center of the Dentsply Sirona digital workflow and the interface to practice administration and planning software.

To optimally support the processes in practice, Sidexis 4 combines a wide variety of sophisticated tools with an intuitive, modern design. Not only do you have all of the necessary tools and images at your disposal, but through the use of the multi-award-winning operating concept, they are always just a few simple clicks away.

The Sidexis 4 digital Lightbox works flexibly with the various types of images and allows both 2D and 3D images to be examined and displayed seamlessly and simultaneously within the same workspace. The highly intuitive Compare function allows you to conveniently analyze multiple images simultaneously, creating true ease while diagnosing your patient and creating a treatment plan. Sidexis 4 creates true efficiency in practical processes.


Examination of 2D and 3D with the Lightbox

Endodontics in the 3rd dimension

Discover the possibilities when you see more

Endodontics is a complex and challenging discipline and can often hold many obstacles. A survey of dentists, titled "Working in the dark"*, brought to light some of these endodontic challenges. The participating dentists associated root canal treatments with stress, frustration and lack of control. This certainly has to do with the complexity of root canal treatments in general, but it is also highly influenced by the limitations of two-dimensional imaging, which is still the main standard for pre-endodontic diagnostics. Intraoral X-rays offer only a two-dimensional representation of the actual clinical situation where important information often remains hidden and can be overlooked. In these cases, three-dimensional X-ray images offer invaluable benefits to your treatments and your practice. Studies have shown that the additional information provided by three-dimensional X-ray technology allows for decisive treatment decisions.**
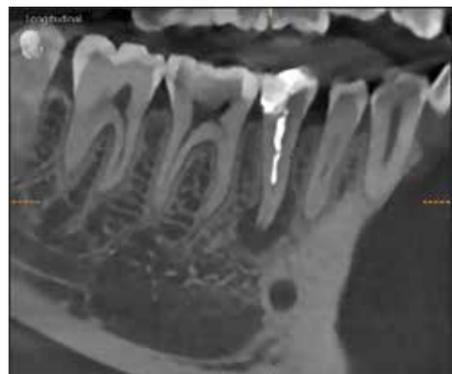
On a 2D intraoral X-ray, this tooth could appear to have been treated correctly. The apical abscess suggests the need for a retreatment, but the endodontic plan wouldn't be easy. This could require to adjust the plan during the treatment.

Thanks to the 3D image, it appears clearly that this tooth needs to be retreated. It is then possible to plan a precise procedure before the treatment itself in order to have the material ready and obtain predictable outcomes.

* Dahlström L, Lindwall, Rystedt H, Reit C. ‚Working in the dark': Swedish general dental practitioners on the complexity of root canal treatment. Int Endod J. 2017;50:636-645.
** Mota de Almeida FJ, Knutsson K, Flygare L. The effect of cone beam CT (CBCT) on therapeutic decision-making in endodontics. Dentomaxillofac Radiol 2014;43:20130137.
   Rodríguez G, Abella F, Durán-Sindreu F, Patel S, Roig M. Influence of Cone-beam Computed Tomography in Clinical Decision Making among Specialists. J Endod 2017;43:194-199.

3D Software Applications

Awaken the full potential of the equipment in your practice

Intelligent imaging software provides you far more than just an efficient and intuitive access to your X-rays. It supports your treatment and makes it possible for you and your practice to offer a broader, more robust range of services. Additionally, you're able to increase patient satisfaction and understanding through improved treatment presentation utilizing modern communication channels and optimized visualization. Therefore, we, at Dentsply Sirona, make sure that our high-quality practice equipment is always accompanied by an intelligent software solution. With our software application for endodontics, we support you in the planning of your endodontic treatment from the visualization of the root canals, to the production of templates, all the way to accessing the cavity.

Diagnose
Sidexis® 4

Plan
SICAT® Endo
CEREC®

Consult
Sidexis® 4
Sidexis® iX

Treat
ApexLocator
SICAT® ACCESSGUIDE

Axeos

Axeos®, Heliodent Plus®, Xios XG Supreme

SICAT Endo
More than 3D

SICAT Endo is the 3D solution for the diagnosis and planning of endodontic treatments. In addition to a more detailed implementation of the guided workflow, SICAT Endo simplifies the entire endodontic treatment process and thus, provides an increased sense of security and confidence in the final clinical outcome.

SICAT ACCESSGUIDE
Efficient, safe and highly accurate

The SICAT ACCESSGUIDE enables more predictable treatment outcomes through its highly accurate surgical guide design, as well as minimally invasive and efficient preparation of the access cavity while reducing the risk of perforation. This provides an even more efficient, safe and optimized treatment process.

The advantages at a glance

• The best of both worlds: The combination of 2D and 3D data simplifies the diagnostic process and enables simultaneous navigation in the 2D and 3D view, allowing for easy identification of all root canals.

• Integrated optical impressions enable precise visualization and an efficient workflow, support locating occlusal reference points, optimal treatment planning, the preparation of the access cavity and the determination of the time needed for treatment.

• Determine the exact root canal course, working length and linear access utilizing the excellent 360° view.

1 **X-ray scan**

Thanks to full integration with Sidexis 4, you can immediately use the diagnostic data from your Xios XG Supreme intraoral sensors and the 3D data from your Dentsply Sirona Imaging System to start your diagnosis and treatment planning in SICAT Endo.

2 **Identify and diagnose root canals**

Identify and diagnose all canals with ease and precision. Use the cutting-edge visualization options for focused endodontic diagnostics and accurately determine your working length.

3 **Patient Consultation**

The ability to create a strategic treatment plan will provide you support during your patient consultations, resulting in improved overall patient communication and case acceptance.

4 **SICAT ACCESSGUIDE for orthograde endodontic treatment**

SICAT ACCESSGUIDE is the first and only surgical guide designed specifically for orthograde or endodontic treatment for better treatment predictability. For further information on the SICAT ACCESSGUIDE, please reference the SICAT website: www.sicat.com.

Axeos

The Practice Builder Solution

Axeos – the 2D/3D specialist system with a large volume and high image quality for practices with a broad treatment offering. Developed together with dentists and clinicians, Axeos provides the fullest range of functions out of all of the Dentsply Sirona extraoral X-ray systems. In addition to excellent image quality and tailor-made 3D volume sizes, the device is fully optimized for enhanced patient comfort. Axeos not only provides quality in performance and comfort, but also with its award-winning design, thanks to the integrated biteblock accessory cabinet and ambient light.

The advantages at a glance

- The Ø 5x5.5 cm FoV is the perfect volume for endodontic treatments
- HD images with a resolution up to 80 µm or Intelligent Low Dose 3D images in the dose range of a 2D X-ray
- Auto-Positioner and Smart Height Adjustment for reproducible optimally positioned images and an efficient workflow
- Unique DCS with Autofocus function for excellent images with high sharpness in the panorama area
- Comprehensive panoramic and cephalometric programs
- Integrated organization system with ambient light for biteblock elements: illuminated from the inside and within reach of the operator

Axeos Ø 5x5.5 cm 3D X-ray

reddot winner 2020

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Orthophos SL

The power performer solution

The 2D/3D high-end system with excellent image quality for practices with a flair for technology and those who simply want more. The integrated Direct Conversion Sensor (DCS) defines the standard for panoramic imaging and delivers a high level of sharpness. With the Autofocus technology you will automatically receive an image with the best sharpness in focus. Orthophos SL offers optimum user comfort through auto-positioning, intuitive operation via the EasyPad® and an individually adjustable ambient light for an exclusive look and feel.

The advantages at a glance

• The Ø 5x5.5 cm FoV is the perfect volume for endodontic treatments

• HD images with a resolution up to 80 µm or Intelligent Low Dose 3D images in the dose range of a 2D X-ray

• Auto-Positioner with patented occlusal biteblock and EasyPad for optimally positioned images and simple reproducibility

• Unique DCS with Autofocus function for excellent images with high sharpness in the panorama area

• Comprehensive panoramic and cephalometric programs
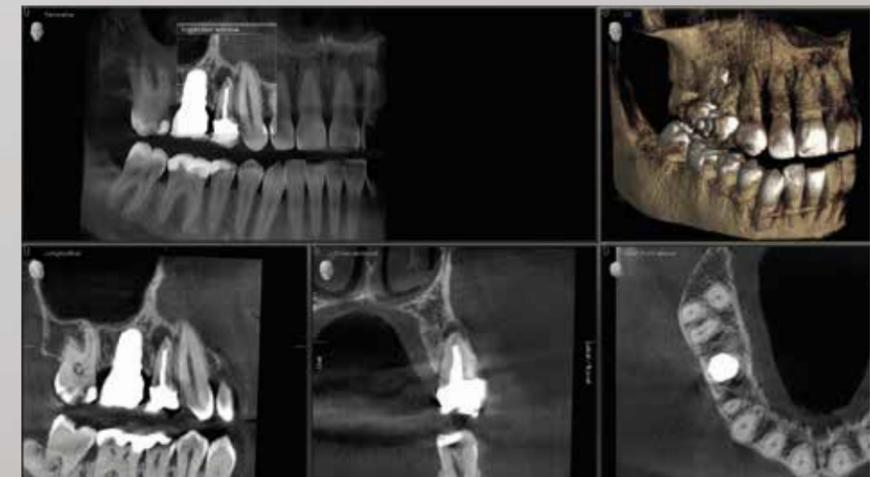
Orthophos SL Ø 5x5.5 cm 3D X-ray

reddot award 2016 winner

iF DESIGN AWARD 2015

Orthophos S

The all-round solution

The high-quality 2D/3D X-ray system with a comprehensive performance spectrum for every practice. Whether used solely as a pure 2D device or with the integration of a 3D module – the Orthophos S is a reliable partner and optimized for daily tasks in the practice. Its CsI Plus sensor with Autofocus function ensures sharp images even in anatomically difficult cases. The patented occlusal biteblock supports easy and reproducible patient positioning. For use in orthodontics, the Orthophos S is optionally available with a cephalometric arm.

The advantages at a glance

- The Ø 5x5.5 cm FoV is the perfect volume for endodontic treatments
- HD images with a resolution up to 80 μm or Intelligent Low Dose 3D images in the dose range of a 2D X-ray
- Auto-Positioner with patented occlusal biteblock and EasyPad for optimally positioned images and simple reproducibility
- 2D CsI Plus sensor with Autofocus function for sharp detail images, even in anatomically difficult cases
- Comprehensive panoramic and cephalometric programs

Orthophos S Panoramic X-ray

The advantages at a glance

• Safe and intuitive operation

• Flexible due to different model variants

• Optional remote or timer operation

• Robust Durability

• Optional integration with your Dentsply Sirona treatment unit

Intraoral X-ray images of the highest quality

The right system for success

Expect only the best. In order to produce a high-quality intraoral X-ray you need a combination of reliable, effective equipment and proper positioning. With the intraoral imaging products from Dentsply Sirona, you get all of this and more.

Images of the highest quality and sharpness? Reproducible at any time? The highest level of patient comfort? With our intraoral holder systems, we fulfill all of these requirements and more – whether you are using intraoral sensors, imaging plates or film.
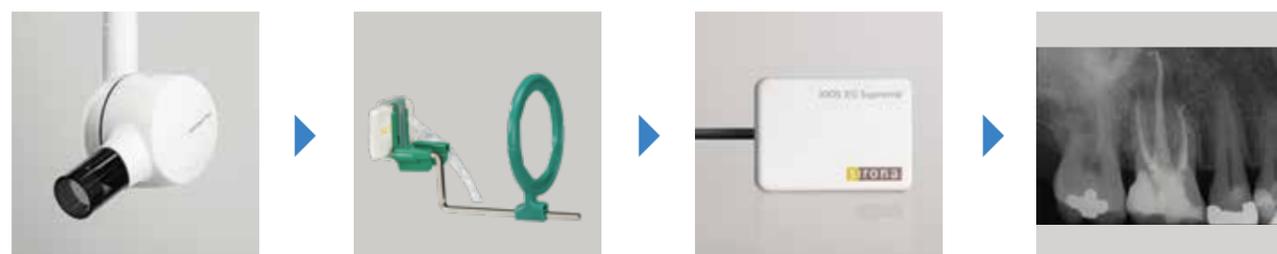
Thanks to the seamless integration of all our intraoral X-ray products, you always achieve the best image quality.

The advantages at a glance

• Premium image quality

• Maximum patient comfort

• Optimized workflow

• Reliable operation

Heliodent Plus

Designed to fit your needs

The Heliodent Plus intraoral X-ray unit is the ideal solution for every practice. Both the modularity of the installation options and the image quality exceed all expectations. Heliodent Plus provides the basis for optimum X-ray images and can be handled efficiently and safely.

Sophisticated installation

The Heliodent Plus adapts to every X-ray situation in your practice. Its versatility and a number of customizable installation options allow for seamless integration into your daily practice workflow.

Heliodent Wall Model

Heliodent Remote Control

Heliodent Remote Timer

Heliodent Manual Exposure Button

Heliodent Plus device model integrated with the treatment unit

Heliodent Plus with Mobile Stand

Heliodent Plus Ceiling Mount

Ceiling combination with LEDview Plus

The advantages at a glance

- Premium image quality
- Dynamic sharpening slider for individual image optimization
- Optimized USB data transfer
- Easy cable exchange

0%   50%   100%

Xios XG Supreme

The perfect partner for your intraoral imaging

With 33 LP/mm* and a special CsI layer, the Xios XG Supreme offers you a high level of image quality: low-noise, high-contrast and high-resolution X-ray images for your diagnosis, without additional unnecessary processing time. Your true partner for chairside imaging, allowing you to work alongside your patient, and eliminating lengthy exposure time and unpredictable results. With the dynamic focus control, the images can be adjusted with just the click of your mouse. Five different examination enhancements support visibility of relevant clinical information with Xios XG Supreme: Hygiene, Endodontics, General Dentistry, Restorative, and Periodontics. Image sharpness, brightness and contrast can be individually adjusted in these modes.

Premium image quality for reliable findings

USB connectivity

The use of Xios XG Supreme sensors in combination with the new USB 3 interface allows for fast information read-out and optimized data transfer. Protected connection plugs provide additional durability in daily practice use.

Cable exchange

Cable replacement is simple and can be carried out chairside: If the cable is damaged, you no longer need to worry about long interruptions in your workflow, you now have the ability to change it easily in your office.

Cable Clip

Two versions of cable clips (desktop and wallmount) are avaible to protect your sensor cables – for a great stability.

* Theoretical Resolution

Technical Features

Performance features	Axeos	Orthophos SL 3D	Orthophos S 3D
X-ray generator	60–90 kV, 3–16 mA	60–90 kV, 3–16 mA	60–90 kV, 3–16 mA
Panoramic exposure time	P1: max. 14.2 s P1 Quickshot: max. 9.1 s	P1: max. 14.2 s P1 Quickshot: max. 9.1 s	P1: max. 14.2 s P1 Quickshot: max. 9.1 s
Ceph exposure time	Standard 9.4 s Quickshot 4.7 s	Standard 9.4 s Quickshot 4.7 s	Standard 9.4 s Quickshot 4.7 s
User interface	New EasyPad	EasyPad	EasyPad
Patient positioning	Auto-Positioner (occlusal biteblock)	Auto-Positioner (occlusal biteblock)	Auto-Positioner (occlusal biteblock)
Smart Height Adjustment	yes	–	–
Panorama technology	DCS	DCS	CsI Plus
Autofocus	yes	yes	yes
Ceph arm (optional)	left or right	left or right	left or right
Ceph unit with 2 sensors	yes	yes	yes
Quickshot	yes	yes	yes
Image volume (dxh)	5x5.5 cm to 17x13 cm	5x5.5 cm to 8x8 cm 5x5.5 cm to 11x10 cm	5x5.5 cm to 8x8 cm 5x5.5 cm to 11x10 cm
Intelligent Low Dose	yes	yes	yes
HD mode	yes	yes	yes
Base	optional	optional	optional
Wheelchair accessible	yes	yes	yes
Remote operation	optional	optional	optional
Ambient light	yes (cabinet and backlight)	yes (backlight)	–

Heliodent Plus	
Generator type	High-frequency generator for constant high voltage
Tube voltage	Adjustable between 60 kV and 70 kV
Tube current	7 mA
Focal spot	0.4 (IEC 336)
Line voltage	120–240 V ± 10 % without switching, 50/60 Hz
Exposure time	Incrementally adjustable from 0.01 to 3.2 s
Detector media	Preset for film and Xios XG Supreme sensors, exposure times can be individually adjusted, also for imaging plates and other sensor systems
Display	Multicolored display to show the different system states
Focus-to-skin distance	Standard 20 cm, optional 30 cm
Available installation options	Wall-mounted installation with three arm lengths, model mounted on treatment center, installation with manual release, remote control or remote timer, ceiling model, ceiling combination with LEDview, mobile model

Xios XG Supreme	
Sensors	
Sensor 0: Active surface	18 mm x 24 mm
Sensor 0: Overall dimensions	23.6 mm x 32 mm x 7.5 mm
Sensor 1: Active surface	20 mm x 30 mm
Sensor 1: Overall dimensions	25.4 mm x 38.3 mm x 7.5 mm
Sensor 2: Active surface	25.6 mm x 36 mm
Sensor 2: Overall dimensions	31.2 mm x 43 mm x 7.5 mm
Physical pixel size	15 µm
Measured resolution	28 lp/mm
Theoretical resolution	33 lp/mm
Sensor cable length	Up to max. 2.7 m
USB interface	
USB port of USB interface	USB 3
Power supply	USB port
WiFi	
Technology	IEEE 802.11b/g
Charging station for WiFi function	Storage device and charger with LED status display

Technical Dimensions
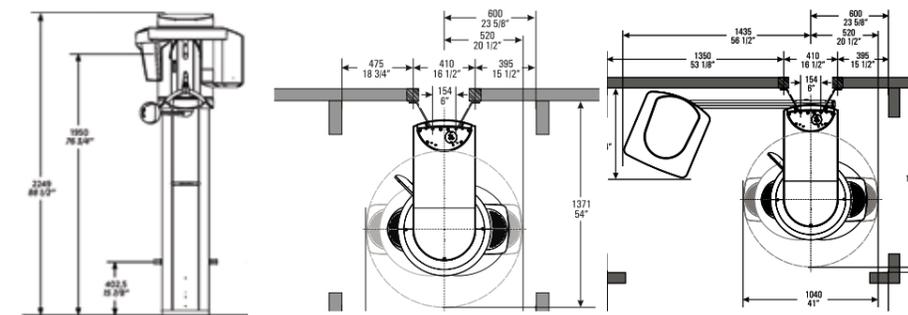
Recommended room dimensions:
- Orthophos/Axeos: space required 1,280 mm x 1,411 mm
- Orthophos/Axeos with ceph side arm: space required 2,155 mm x 1,411 mm

Minimum room dimensions:
- Orthophos/Axeos: space required 1,040 mm x 1,371 mm
- Orthophos/Axeos with ceph side arm: space required 1,955 mm x 1,371 mm

You can find all further measurements in the respective installation requirements.

Requirements for Sidexis 4
Specification for one server and an unlimited number of workstations.

	Sidexis 4 Server	Min. for 2D Workstation	Min. for 3D Workstation
Operating system*	Windows Server 2012 R2 Windows Server 2016 Windows Server 2019	Windows 8.1 Pro (64 bit) Windows 10 Pro (64 bit)	Windows 8.1 Pro (64 bit) Windows 10 Pro (64 bit)
CPU	≥ 2.3 GHz QuadCore Processor with 64 bit (x64)	≥ 2 GHz DualCore	≥ 2.3 GHz QuadCore Processor with 64 bit (x64)
RAM	≥ 8 GB	≥ 4 GB	≥ 8 GB
Graphic card**	≥ 1 GB	≥ 512 MB	≥ 1 GB
DirectX	DirectX 10 with WDDM 1.0 or higher driver	DirectX 9.0c	DirectX 10 with WDDM 1.0 or higher driver

* For 64-bit operating systems, installation under Boot Camp is also approved.

** To ensure that the interaction with the volume rendered in 3D is reliably "jerk-free", graphic cards with at least the following passmarks are required. GPU benchmark values recommended: NVIDIA: Passmark > 1000; AMD: Passmark > 1500; Onboard: > 540.

Requirements for one image acquisition computer
Specification for only one computer needed to allow device integration in your practice.

	Axeos	Orthophos S 3D / Orthophos SL 3D	Orthophos S 2D / Orthophos SL 2D
Operating system	Windows 10 (64 bit)	Windows 8.1 Professional (64 bit) Windows 10 (64 bit)	Windows 8.1 Professional (64 bit) Windows 10 (64 bit)
RAM	16 GB	16 GB	16 GB
CPU	≥ 2.3 GHz QuadCore Processor 64 bit with SSE3 support (Intel i73xx or comparable)	≥ 2.3 GHz QuadCore Processor 64 bit with SSE3 support (Intel i73xx or comparable)	SL*: ≥ 2.3 GHz QuadCore Processor 64 bit with SSE3 support (Intel i73xx or comparable) S: ≥ Intel i3 3rd Generation or comparable RAM 16 GB
Hard drive	≥ 2 TB	≥ 1 TB	≥ 1 TB
Graphic	DirectX 11-graphic adapter (min. 4 GB RAM)	DirectX 11-graphic adapter (2 GB RAM dedicated) with latest graphic card driver	SL*: DirectX 10-graphic card (1 GB RAM dedicated) or Intel Onboard Graphics with latest graphic card driver) S: DirectX 9.0 graphic card (512 MB RAM dedicated) or Intel Onboard Graphics with the latest graphic card driver
Screen resolution	Minimum 1280 x 1024 pixels Recommended 1600 x 1200 pixels		

* Panorama editor.

Procedural Solutions

Preventive
Restorative
Orthodontics
Endodontics
Implants
Prosthetics

Enabling Technologie

CAD/CAM
Imaging
Treatment Centers
Instruments

Dentsply Sirona

Sirona Dental Systems GmbH
Fabrikstraße 31, 64625 Bensheim, Germany
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THE DENTAL
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