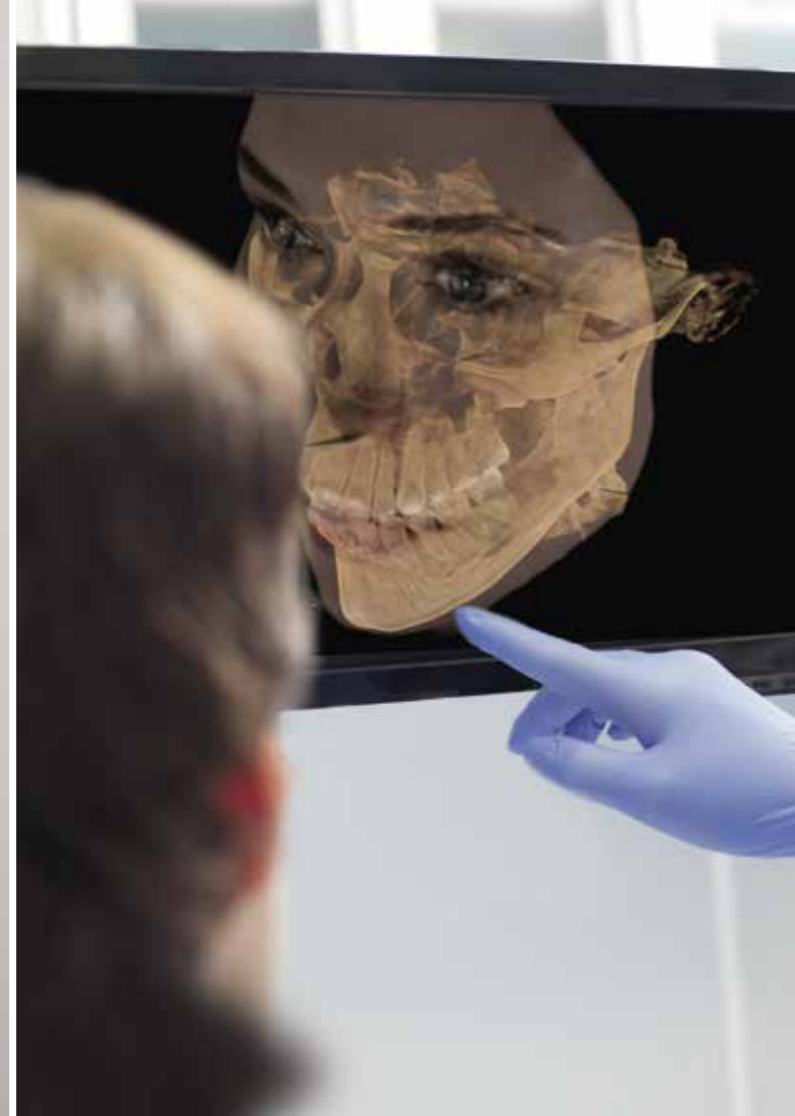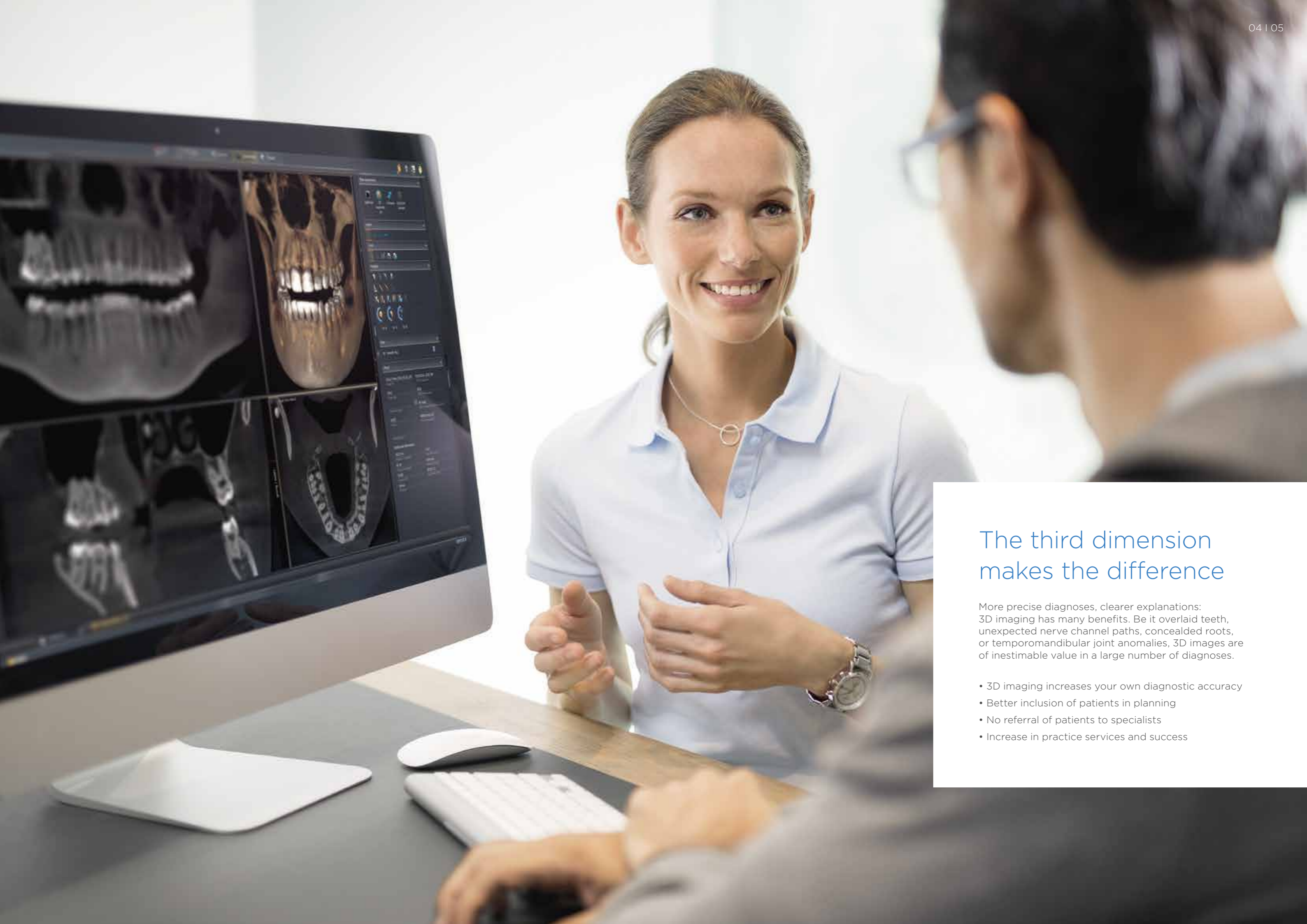# The 3D x-ray family

dentsplysirona.com

As versatile as practice life.

The Dentsply Sirona 3D x-ray family offers three units that together cover the entire range of all specializations regarding visual possibilities: Galileos Comfort Plus, Orthophos SL 3D and Orthophos XG 3D. Which unit is best for you and your practice? Find out here!

The third dimension makes the difference

More precise diagnoses, clearer explanations:
3D imaging has many benefits. Be it overlaid teeth,
unexpected nerve channel paths, concealded roots,
or temporomandibular joint anomalies, 3D images are
of inestimable value in a large number of diagnoses.

• 3D imaging increases your own diagnostic accuracy

• Better inclusion of patients in planning

• No referral of patients to specialists

• Increase in practice services and success

Work quickly, precisely and reliably

Dentsply Sirona imaging units stand out for their simple operation and positioning, thus providing efficient workflows. The unprecedented image quality allows for extremely precise diagnosis and planning. With Dentsply Sirona, you trust a global brand with hundreds of thousands of units in practice distinguished by their Made in Germany quality.

Optimum Workflow   Unparalleled   Proven solution
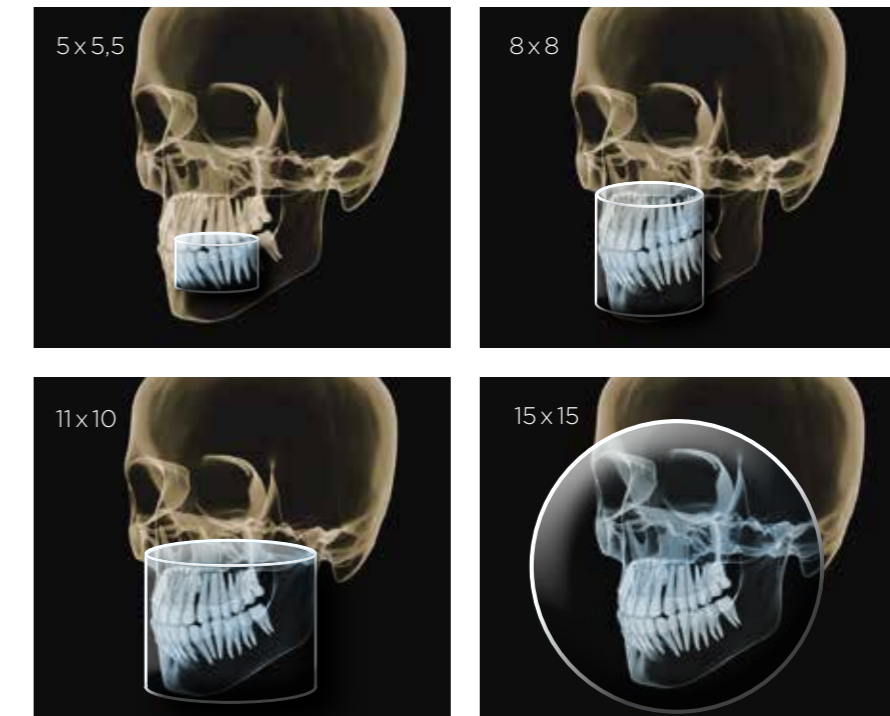   image quality

Flexibility and reliability at a low dose

The Dentsply Sirona 3D x-ray family combines high resolution image quality with great flexibility. Simply choose the best volume for your practice – this can be easily adjusted for the individual patient situation and supports diagnosis with clear, sharp images at the lowest dose.
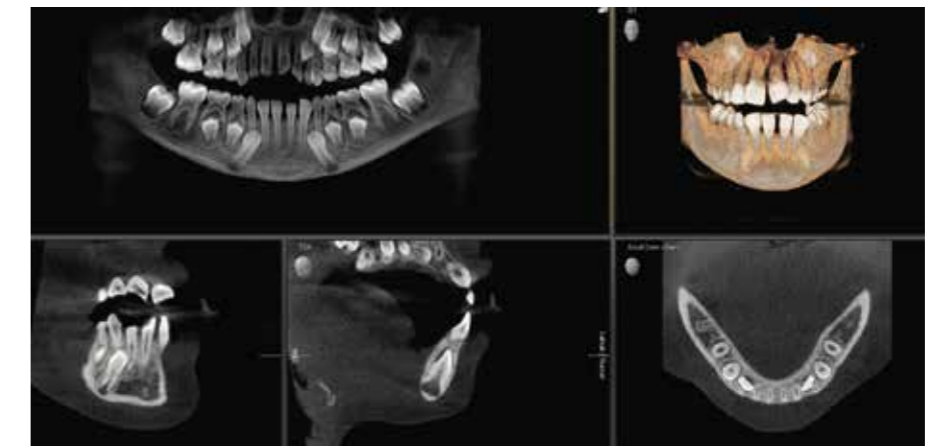
An overview of the volumes available in the Dentsply Sirona 3D family:

Other available volumes (varies according to the unit): 8 cm x 5.5 cm; 11 cm x 8 cm; 11 cm x 7.5 cm upper jaw; 15 cm x 8.5 cm upper jaw; 15 cm x 8.5 cm lower jaw.

More possibilities for your practice

8 cm x 8 cm images taken in Low Dose with 15 μSv

The best image quality for all indications: In order to be ideally prepared for every case, the Dentsply Sirona 3D x-ray family naturally offers out-standing solutions for both 2D and 3D approaches. You gain additional flexibility in 3D thanks to the Low Dose mode which allows for the generating of images at lower radiation dose comparable to the level of 2D x-rays – depending on the indication.

Easy operation, safe positioning

Dentsply Sirona offers unique patented solutions for operating the units and positioning the patients. Optimize your practice workflow with intuitive user interfaces and automatic positioning aids that eliminate unnecessary corrective scans and waiting times.

The new positioning tools make for good imaging.

"Positioning with the Orthophos SL is very easy for our team. The many aids such as automatic light localizers, illuminated height adjustment buttons and intuitive program selection allow us to work efficiently with very good image quality. In combination with Sidexis 4, we have a comprehensive package that gives us absolute confidence in the findings."

PD Dr. Dr. Lutz Ritter, Oral and Maxillofacial Surgery, Hennef

1

2

3

1 **Intuitive operation**

No matter the set up of your X-ray room, the swiveling and tilting EasyPad introduces a high degree of flexibility while clearly arranged buttons and symbols ensure optimum operation.

2 **The patented occlusal bite block**

Position the patient with the patented occlusal bite block. The unit automatically determines the correct tilt of the head and indicates it using corresponding symbols and colors – all you need to do is press the up and down arrows.

3 **Stable positioning for high-quality images**

Stable patient positioning prevents motion blurring. The motorized 3-point head fixation and stable handles give your patients the necessary support. At the same time, the EVI* light localizers show you the patient's position in the volume. The integrated temple width measurement ensures an orbit specific to each patient and thereby results in high image sharpness.

* EVI = Easy Volume Indicator

Working digitally is this easy

Sidexis 4 – the core of the digital workflow with Dentsply Sirona.

The software with its intuitive user interface has a very simple structure: it follows the clear format of your work processes and provides at all times all visual patient data seamlessly and at a glance – whether 2D, 3D or intraoral. This integrates your patients optimally and thus results in high acceptance of the treatment proposal. Sidexis 4 is pure imaging efficiency, providing a quick overview of the entire history of the patient. This allows for the addition of a time dimension to diagnostic options in a very intuitive way. The lightbox is ideal for a comprehensive diagnosis, as it let's you compare 2D and 3D images as well as camera images and facescan data side-by-side.

Simple overview of the patient history

Advantages at a glance

- Modern design
- Software platform for all Dentsply Sirona x-ray units
- Intuitive operation, optimally coordinated workflows
- Simple overview of patient history thanks to the intuitive timeline
- Easy export of DICOM data sets
- Interface of the integrated solutions from Dentsply Sirona

The simple way to a completed implant

Perfectly coordinated software and hardware – this is Dentsply Sirona quality in implantation. With the support of the Galileos Implant software, prosthetic suggestions from the CEREC software can be combined with 3D x-ray data. In this way you enjoy absolute certainty in an efficient, time-saving workflow. And patients can look forward to perfect results with fewer treatment sessions.

1. Session

1 Scan:
In the first step, all necessary images for planning are prepared: Intraoral impressions for the prosthesis – 3D x-ray images for surgical planning.

2 Plan:
The prosthetic suggestion and x-ray data are combined in the software. On the basis of this combination, implant planning and the completion of the appropriate surgical guide follow.

2. Session

3 Place:
Next, the implant is inserted securely and in an uncomplicated fashion using the surgical guide, which allows for minimally invasive work. With CEREC Guide 2, Dentsply Sirona has the most convenient and quickest in-house surgical guide in the world. Or order your surgical guide from SICAT directly out of the software.
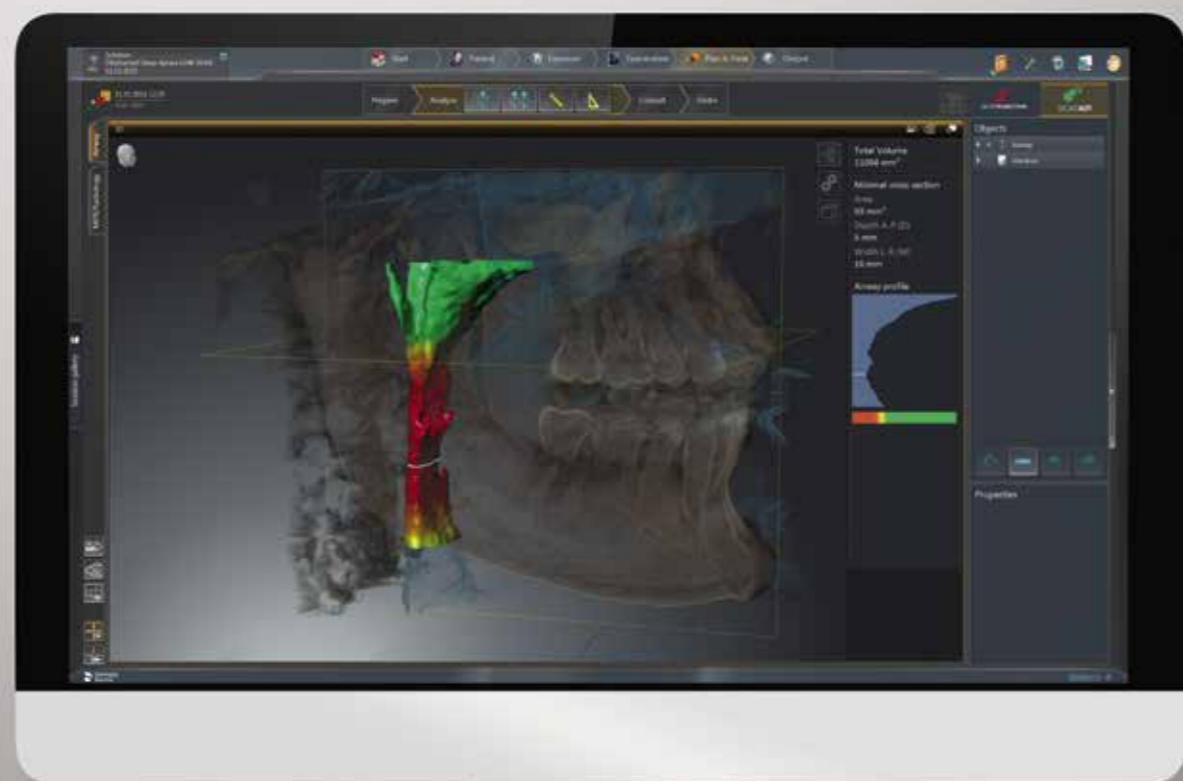
3. Session

4 Restore:
In the final step, you plan the abutment and crown with the CEREC 4.5 software, which is then produced quickly and very precisely in your own practice with CEREC MC X or the MC XL Premium package. The crown is precisely fitted and this process is monitored with either intraoral sensors or a 3D Low dose image.
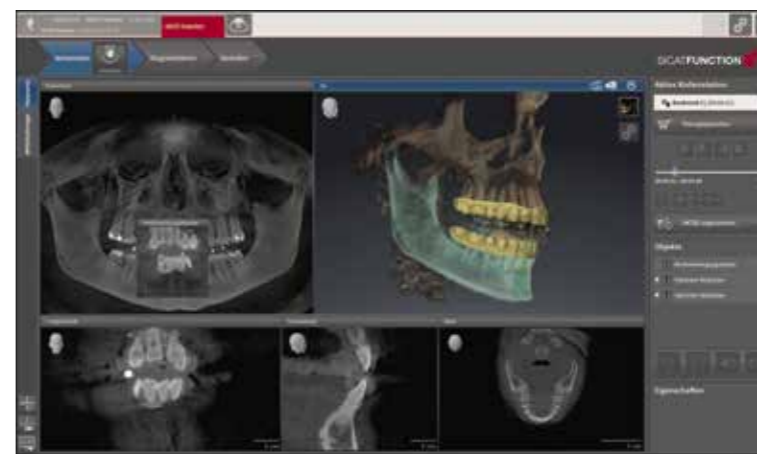
Extensive practice offering made easy

In addition to integrated implantology, Sidexis 4 integrates many other time-saving and convenient software solutions. For example, the SICAT Function offers a simple workflow for functional diagnosis and therapy of temporomandibular joint dysfunction. For the first time, a 3D solution is available that allows for analysis of the upper airway and treatment of obstructive sleep apnea in a purely digital workflow thanks to the new SICAT Air software. In doing so, the dose can even be reduced to match that of 2D images.*

SICAT Function

SICAT Function

For the first time, SICAT Function gives an anatomically correct view of the movement of the lower jaw of the individual patient in the 3D volume. Movement of the mandibular joint can be visualized for each point in the 3D volume.

SICAT Function with CEREC

In combination with CEREC, you receive the actual articulation in CAD/CAM . The advantages: functional prosthetics with reduced grinding effort and implementation of new treatments.

SICAT Optimotion

SICAT Optimotion is the world's first CMD therapeutic appliance that implements both the individual patient movements and the pure condyle-fossa relationship in the therapeutic appliance. Depending on the preference, the SICAT Optimotion is completed purely digitally with SICAT.

SICAT Air and SICAT Optisleep

After analysis of the upper airway in 3D, SICAT Air gives a report on the effect of the planned protrusion degree and possible effects on the temporomandibular joint. Ordering an individual patient therapeutic appliance with Optisleep is done purely digitally.

1 Freedom in centric   **2** canine guidance   **3** Michigan principle

*Orthophos SL only

Endodontics in the third dimension

Due to their unparalleled image quality, Orthophos units are a great fit for all endodontic requirements. Together with 3D Endo™ they open up new dimensions for your practice. With a small 3D volume of 5 cm x 5.5 cm, the Orthophos units are equipped with a perfect field of view for all endodontic cases. In combination with the High Definition (HD) mode you can expect extremely sharp images with an outstanding level of detail of up to 80 µm.

Complex cases? Nothing left to hide?

3D Endo™, the first CBCT based software designed to improve endodontic treatment planning for more predictability. Plan for optimal cavity access and your final instrument.

Designed to improve treatment quality

- Isolate the tooth of interest
- Clearly visualize the tooth anatomy in 3D
- Identify all canals
- Anticipate risky areas

Know what to expect

- Evaluate 3D working length and cavity access depth
- Locate canal orifices without opening the tooth
- Plan for optimal cavity access and your final instrument
- Simple and consistent methodology for all cases

An intuitive way to analyze CBCT scan data

- Simple and consistent methodology for all cases
- Know how to use the software in 30 min
- Quick & Easy to use

Experience you can rely on

Around the world, over 100,000 extraoral imaging units from Dentsply Sirona have been installed in practices. They impress users with their high German quality standards, proverbial reliability in use, and ease of operation. Reliable after-sales support and topical product training provide additional peace of mind.

Dentsply Sirona is a pioneer in the field of imaging. We have been establishing new methods for 120 years – but only when they really do provide a simpler solution to challenges and allow for faster, safer and more economic work – and all to the benefit of the patient. The ideas that our 200+ developers are pursuing are becoming products that can be absolutely relied on   in everyday practice thanks to our extensive experience. Such quality is clear when working with a Dentsply Sirona 3D x-ray unit. The Made in Germany workmanship is first-class. Choosing Dentsply Sirona, means choosing a solution built on viable, sustainable products that represent a first-class technological solution not only today, but in the future time and again.

"**Made in Germany**" **quality and future viability:**
At the Center of Innovation in Bensheim, Germany, Dentsply Sirona products are developed for the highest demands.

Which unit
is right for you?

Frequency and type of use, specialization, price, and personal preferences – every dental practice has its own requirements for an x-ray unit. Here is a quick overview of which Dentsply Sirona 3D x-ray unit is right for you.

Units at a glance

	Orthophos XG 3D	Orthophos SL 3D	Galileos Comfort Plus
General dentists	▪	▪	–
Orthodontic practice	▪	▪	▪
Implanting dentist	▪	▪	–
Implantology practice	–	▪ Orthophos SL 3D 11 cm x 10 cm	▪
Oral and maxillofacial surgery	–	▪ Orthophos SL 3D 11 cm x 10 cm	▪
Radiology center	–	▪ Orthophos SL 3D 11 cm x 10 cm	▪
ENT practice	–	▪ Orthophos SL 3D 11 cm x10 cm	▪
Functional diagnosis	–	–	▪

▪ Suitable.

Exactly what you need

You will quickly find out which 3D x-ray unit fits best into your daily routine.
Galileos Comfort Plus, Orthophos SL 3D or Orthophos XG 3D –
high-volume DVT or hybrid unit: All units offer many possibilities
and can be integrated perfectly into your practice.

Galileos and I make
a super team.

Dr. Dr. Dieter Hültenschmidt, Maxillofacial Surgery, Karlsruhe

"Its simple and time-saving operation means that it fits in very well in my practice routine, and its great volume covers all relevant problem areas. Thanks to the great image quality and the 3D volume, I can give my patients the best possible advice. Without my Galileos, I would not be as successful today."

The allrounder
for diagnostics.

Marcin Wojtunik, Specialist in oral surgery, Pfronten

"It is not only because of my interest in technology that I find the combination of direct conversion technology and the reconstructive sharp layer procedure in the Orthophos SL to be truly exciting. The resulting precise images work perfectly for interpretation. In combination with the volume selection in 3D, we have a universally applicable diagnostic partner for our practice."

Individualized x-ray diagnosis with
reduced radiation is important to me.

Dr. Björn Ludwig, orthodontist, Traben-Trarbach

"As an orthodontist, I treat patients of all ages, whose treatment presents all kinds of x-ray requirements. The Orthophos XG 3D helps me with its variety of programs and possibilities for reducing radiation from 2D to 3D – for me, this is individual and practical x-ray technology."

Galileos Comfort Plus

A magnificent 3D x-ray unit that is characterized by reliable results and has absolute flexibility, the simplest operation, and high resolution image quality.

Integrated Implantology

Integrated implantology reduces the number of sessions required to achieve a completed implant. With the Galileos implant software, you can combine the prosthetic suggestion from CEREC with 3D x-ray data in order to make a simple plan for the implant.
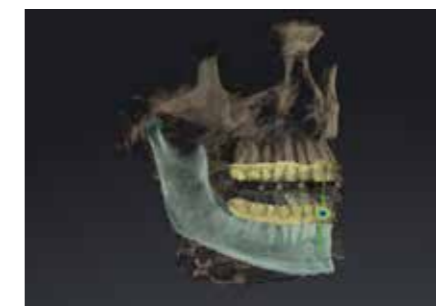
SICAT Function

For the first time, the software for diagnosis and treatment of cranial mandibular dysfunctions gives an anatomically correct view of the the individual patient movement of the lower jaw in the 3D volume.

SICAT Air

The software allows for the analysis of the upper airway in 3D and supports efficiently in the planning of an appliance-based therapy of obstructive sleep apnea with Optisleep.

The Galileos Comfort Plus is the comprehensive package to meet the highest of demands with an extremely low dose and unparalleled reliability. At the same time the optionally integrated Facescanner offers every practice extremely up-to-date patient advice.

All this makes Galileos Comfort Plus not only a three time Townie award winner (2013–2015), but in fact the unit recommended by dentists.

Integratable Facescanner

While taking the x-ray image, the optionally integrated Facescanner plots the patient's facial surface. This realistic illustration makes your treatment suggestions for patients more understandable and builds confidence in your expertise.

Orthophos SL 3D

Orthophos SL is the latest member of the successful
Sirona 3D imaging family. It wins points for functionality,
quality and design.

With the Orthophos SL 3D, your practice is extremely well prepared for various treatment situations. On the 2D side, the groundbreaking DCS sensor and SL technology satisfy the requirements of dentists with very high demands for panoramic imaging. In 3D, a variety of volumes allows for easy adjustment of the given indication: whether it be 11 cm x 10 cm for the full dentition including wisdom teeth and upper airways, an 8 cm x 8 cm standard volume or a 5 cm x 5 cm for a targeted area of interest – meaning your practice is well prepared for all eventualities. Additionally you can flexibly define image parameters based on the indication from high definition to greatly dose reduced. The optional ceph arm provides detailed, high-contrast cephalometric images perfectly suited for orthodontic analyses and tracings. In combination with the pioneering Sidexis 4 software, the Orthophos SL offers a variety of innovative solutions for the practice workflow. Patients appreciate the soothing Ambient Light, which offers a choice of over 30 colors for a pleasant atmosphere in your x-ray room that fits perfectly into the look of your practice.

Smart options for all practices

1 DCS and Sharp Layer technology

Thanks to DCS and SL technology, you not only get high-resolution panoramic images in the sharp layer, but can respond interactively within the image to special cases (lingually/buccally) – without additional imaging.

2 Variety of volumes

Whether the analysis of the upper airways, the extraction of wisdom teeth wisdom teeth or the focused view of a dental area, the Orthophos SL 3D has a number of volumes for a broad spectrum of applications.

3 E(asy) V(olume) I(ndicator) light localizer

In order to make best use of volume sizes, the EVI light localizer automatically indicates the patient's position in the volume.

A true all-in-one imaging unit. Unbelievably sharp 2D panoramic images, full flexibility in 3D volumes, and simple, dependable positioning of the patient for perfect images and optimal reproducibility – the Orthophos SL 3D simplifies the imaging workflow for your entire team.

DCS and Sharp Layer technology   Variety of volumes   EVI light localizer

DESIGN AWARD 2015

reddot award 2016 winner

Without DCS

More direct with DCS

x-ray

x-ray

Light

electrical signal

electrical signal

image

image

DCS – Sharpness down to the smallest detail

Experience the future of panoramic imaging with the Direct Conversion Sensor (DCS)*.
X-rays are converted directly to electrical signals – in contrast to conventional systems
there is no signal loss due to light conversion. Your advantage: Incomparable definition
even at very low dose.

*Only with Orthophos SL
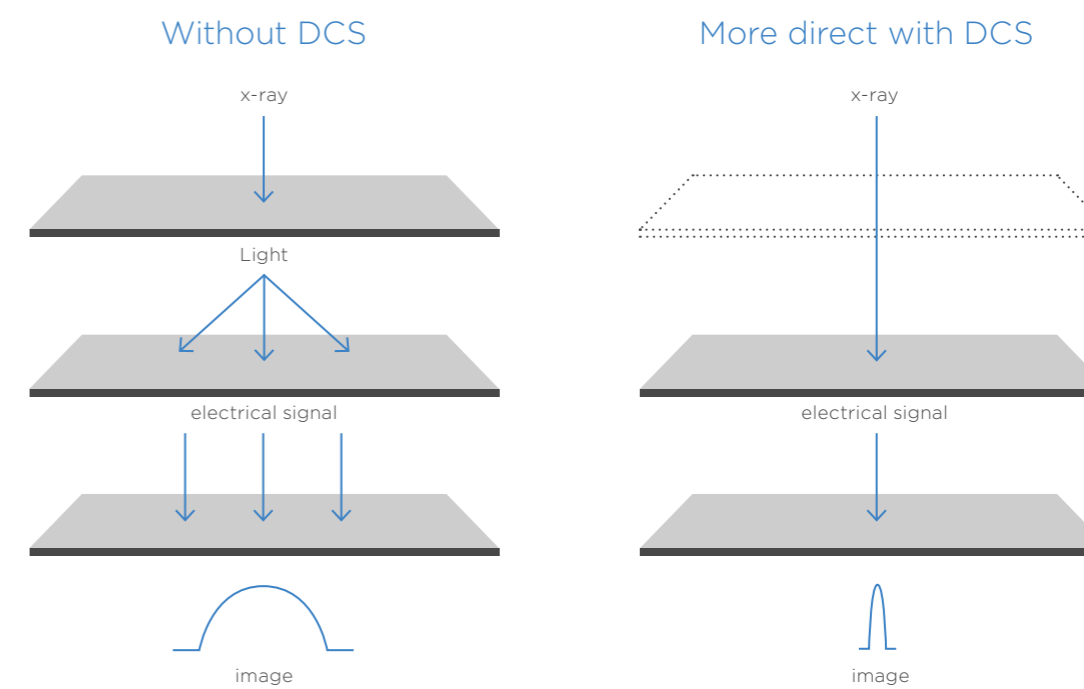
dentsplysirona.com/dcs-technology

Learn more about our DCS technology on our website

Low Dose: CBCT in a 2D image dose range

Indication-based diagnosis using CBCT images in the same dose range as 2D X-ray images is now possible with the Low Dose mode. Its optimized pre-filtering preserves dense structures such as bone even at a highly reduced dose, allowing for easy and efficient use in many specialist fields, for example, orthodontics or implantology.

Your practice will be even more flexible. Depending on the patient case, you decide: whether to use your Orthophos SL to obtain high-resolution, focused volumes for the finest of structures (HD), balanced images for general questions (SD), or Low Dose imaging for minimum radiation doses.

Low dose application examples
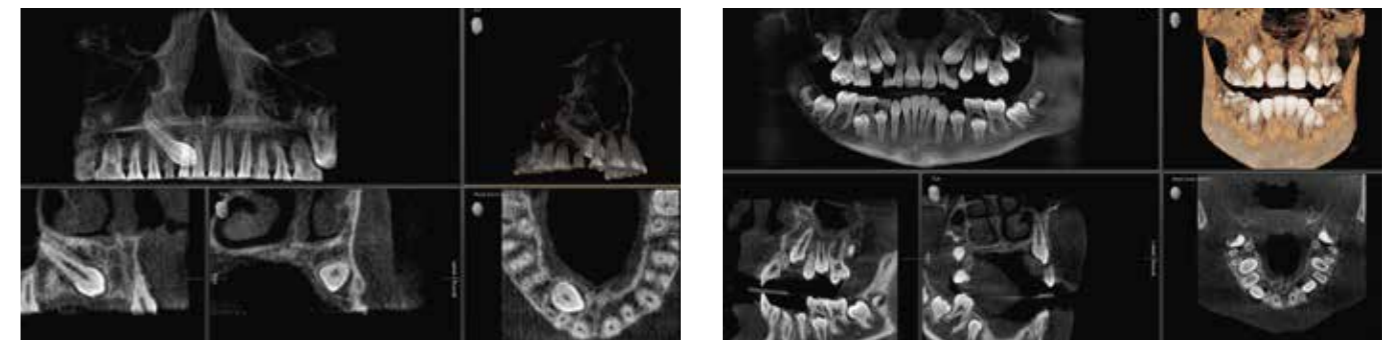
Locating displaced canine teeth 5 cm x 5,5 cm at 3 µSv

Determining the position of teeth 8 cm x 8 cm at 8 µSv

Low Dose for a wide range of clinical tasks

• Locating displaced canine teeth

• Determining the position of teeth and reviewing courses of treatment in orthodontics

• Postoperative 3D check in implantology and surgery

• Analysis of the airways and paranasal sinuses

"With the new Low Dose mode, I can now optimally check the success of a procedure postoperatively and in 3D without exposing the patient to unnecessary radiation levels"

Dr. med. dent Gerd Frahsek, Velbert

Orthophos XG 3D

Optimized for daily tasks in the practice: The world's most popular hybrid unit Orthophos XG 3D combines 2D and 3D x-rays.

With a volume of 8 cm x 8 cm, Orthophos XG 3D is perfectly adapted to fit the needs of any practice: One scan is sufficient for capturing the entire jaw. MARS (Metal Artifact Reduction Software) reduces artifacts that might occur from metal fillings, and thus prevents incorrect diagnoses. If an even smaller volume is sufficient, choose the reduced volume of 5 cm x 5.5 cm. In difficult cases and for endodontics, the HD mode provides extremely detailed images. In all standard cases, the extensive panoramic and cephalometric programs are guaranteed to deliver the right x-ray image.

Optional Ceph arm

The traditional cephalometric function of the Orthophos XG 3D provides lateral and symmetrical p.a. or a.p. images for diagnosis. In cases of displaced teeth, you can also fall back on the benefits of 3D x-ray to determine their exact location.

Comparison of standard mode and HD mode

Mode	VOL 1 (8 cm Ø x 8 cm height)		VOL 2 (5 cm Ø x 5,5 cm height)	
Standard mode	■ 200 individual images ■ Voxel size 160 µm		■ 200 individual images ■ Voxel size 160 µm	
HD mode	■ 500 individual images ■ Voxel size 160 µm		■ 500 individual images ■ Voxel size 100 µm	

HD image quality with ASTRA

ASTRA provides brilliant, contrast-rich images and thereby creates ideal conditions for a reliable diagnosis.

Simply reliable. Every day. Dentists that have decided for an Orthophos XG 3D can confirm this sentiment. Since its introduction dental professionals have been impressed by its ability to perfectly match daily practice tasks. The option to upgrade to 3D at any time gives it the capability to grow with your practice.
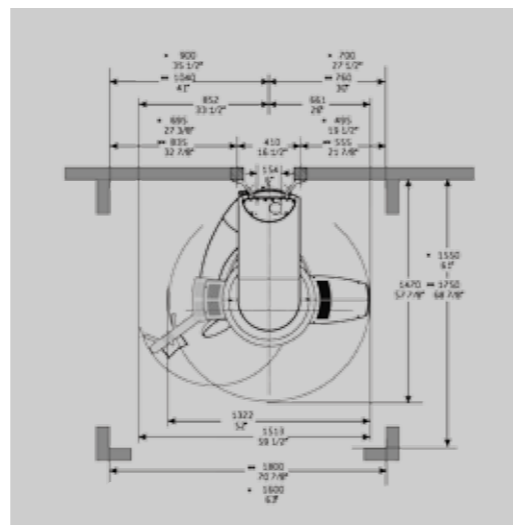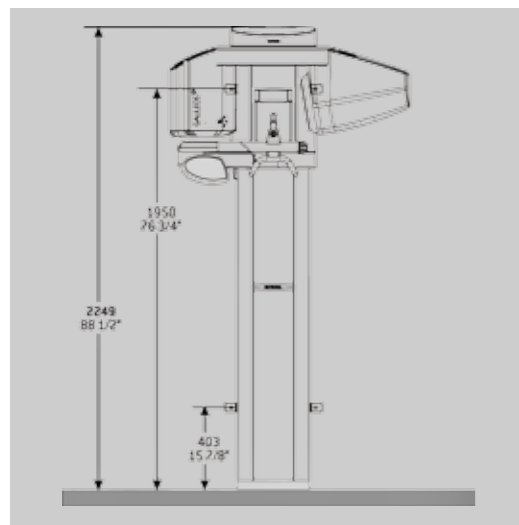
Space requirements

Orthophos: Space requirements min. 1,280 mm x 1,411 mm

Orthophos: With Ceph arm at least 2,155 mm x 1,411 mm
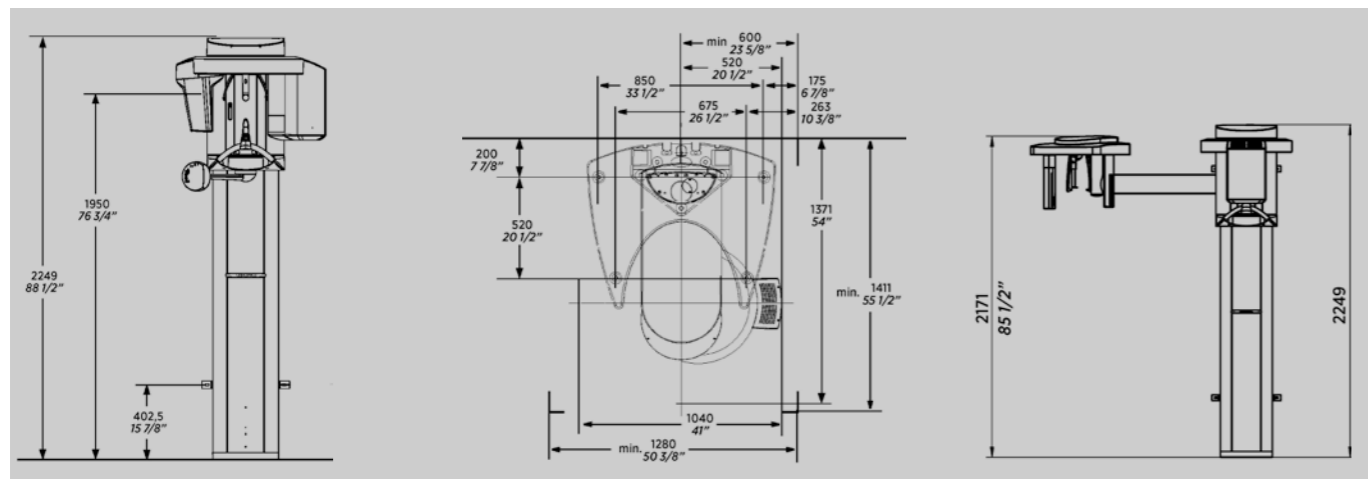
Galileos Comfort Plus: Space requirement at least 1,600 mm x 2,250 mm

*Minimum space size.**Recommended space size.

Technical properties

Overview of performance features	Galileos Comfort Plus	Orthophos SL 3D	Orthophos XG 3D
Imaging volume	15 cm spherical imaging volume collimated 15 x 8.5 cm (UJ/LJ)	11 cm Ø x 10 cm height 11 cm Ø x 8 cm height 11 cm Ø x 7,5 cm height 8 cm Ø x 8 cm height 8 cm Ø x 5.5 cm height 5 cm Ø x 5.5 cm height	8 cm Ø x 8 cm height 8 cm Ø x 5,5 cm height 5 cm Ø x 5,5 cm height
3D resolution: Isotropic voxel size	0.25/0.125 mm	0.16 mm; 0.08 mm in HD mode	0.16 mm; 0.1 mm in HD mode
Scan time/exposure time	14 s/2–5 s	2–5 s; 14 s im HD mode	2–5 s; 14 s in HD mode
X-ray generator kV mA	98 3–6	60–90 3–16	60–90 3–16
Effective dose (Ludlow)	20 µSv–154 µSv	Low Dose: 3 µSv–20 µSv SD: 23 µSv–145 µSv HD: 57 µSv–273 µSv	14 µSv–166 µSv
Minimum space need (depth x width x height)	1,600 x 1,600 x 2,250 mm	1,411 x 1,280 x 2,250 mm	1,411 x 1,280 x 2,250 mm
Door size	For setup at least 66 cm	For setup at least 66 cm	For setup at least 66 cm
Weight	X-ray unit approx. 120 kg	X-ray unit approx. 110 kg	X-ray unit approx. 110 kg
Technical equipment			
Operation	EasyPad	EasyPad	EasyPad
Patient positioning	Standing/seated Chin rest/bite block Forehead support and head fixation	Standing/sitting, chin support/bite block, occlusal bite block with automatic patient positioning, universal bite block with colored stop positions	Standing/sitting, chin support/bite block, occlusal bite block with automatic patient positioning for 2D panoramic images Universal bite block with colored stop positions
Floor stand	☐	☐	☐
Wheelchair appropriate	■	■	■
Remote control	☐	☐	☐
Upgrade options	Facescanner (optional)	Cephalometric x-ray (optional), also available as a pure 2D unit with 3D upgrade option	Cephalometric x-ray (optional), also available as a pure 2D unit with 3D upgrade option

■ Available   ☐ Optional

Individual patient positioning even for wheelchair patients.

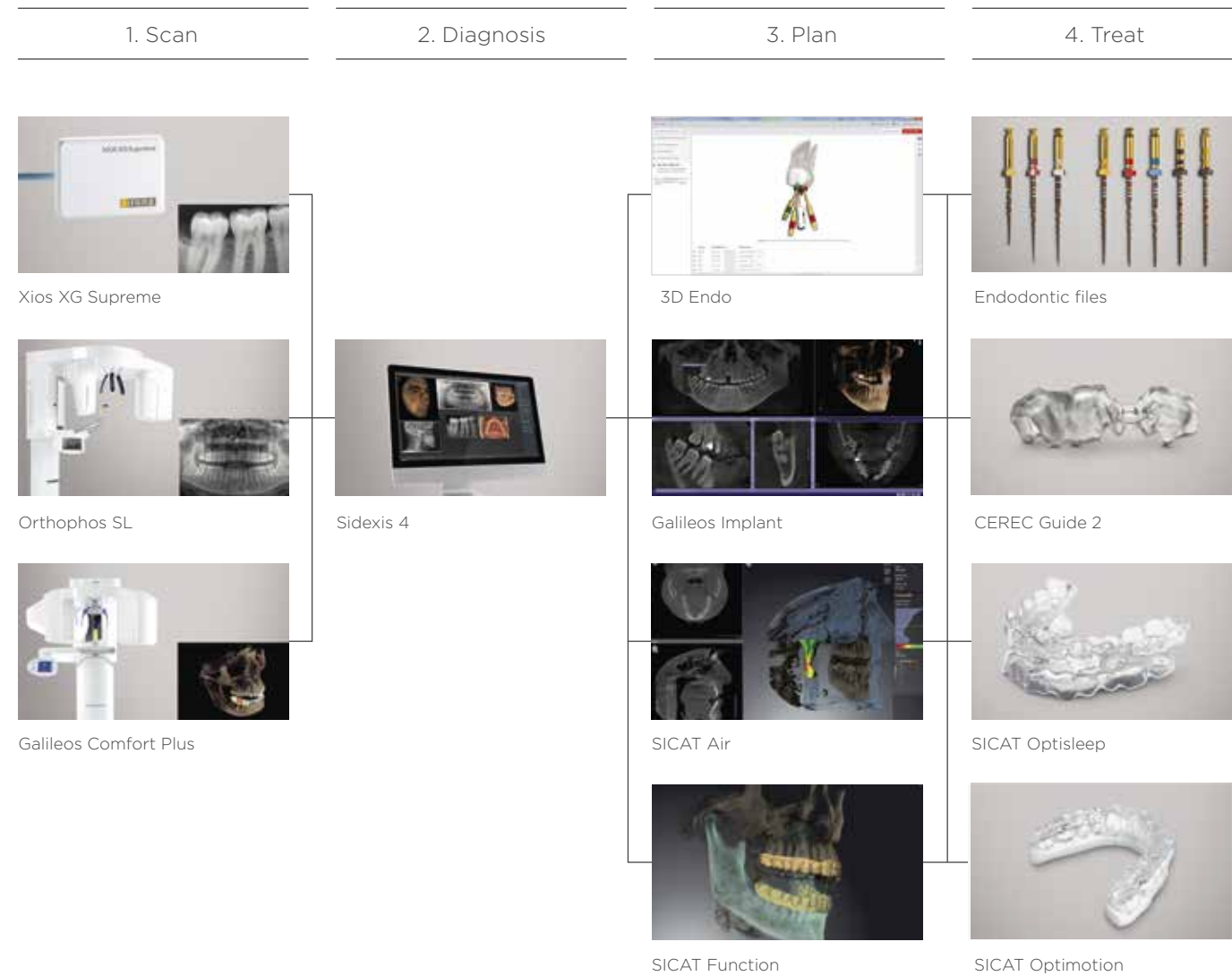Remote control with display of image parameters (optional).

Stable floor stand (optional).
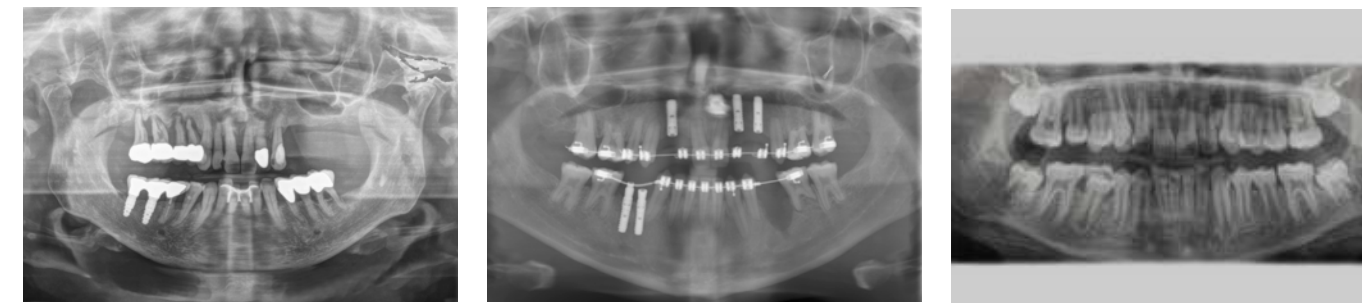
More than images – real solutions

More solutions for your practice with x-rays from Sirona.

The Sidexis 4* with its intuitive user interface and display of all kinds of images on a monitor – whether intraoral, 2D panoramic, or 3D – increases practice efficiency and the accuracy of diagnoses like no other software. But Dentspy Sirona does not stop with the diagnosis – our solutions allow for customized treatment planning for a number of different conditions. The processes remain in your practice and patients appreciate the modern, understandable treatment methods. For satisfied patients and reliable work in your practice.

1. Scan	2. Diagnosis	3. Plan	4. Treat

Xios XG Supreme

Orthophos SL

Galileos Comfort Plus

Sidexis 4

3D Endo

Galileos Implant

SICAT Air

SICAT Function

Endodontic files

CEREC Guide 2

SICAT Optisleep

SICAT Optimotion

*Sidexis 4 system requirements: sirona.com/sidexis4-system_requirements
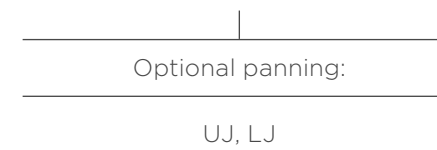
Panorama

P1 orthoradial radiation

P2 without ascending rami

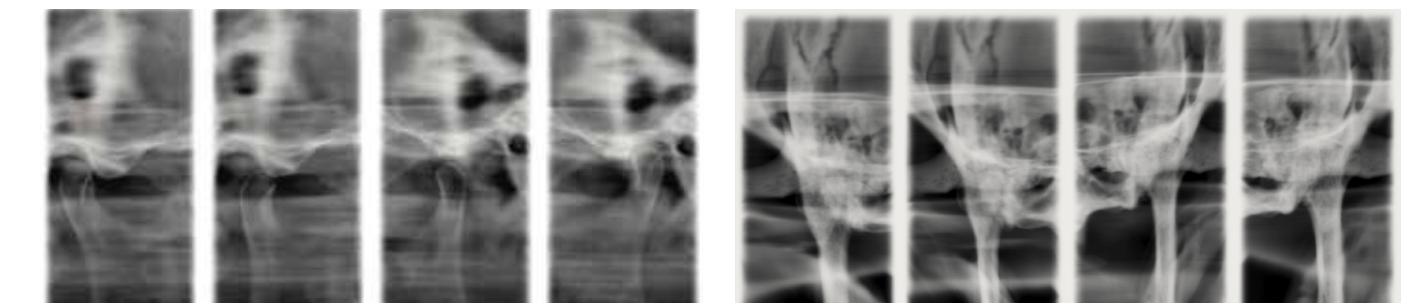P10 pediatric panorama, beam field reduced in height and length

Standard exposure	With a constant magnification of 1.25	With artifact reduction

Optional panning:

UJ, LJ, Left, Right, Individual quadrants
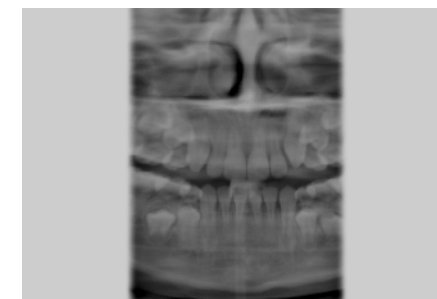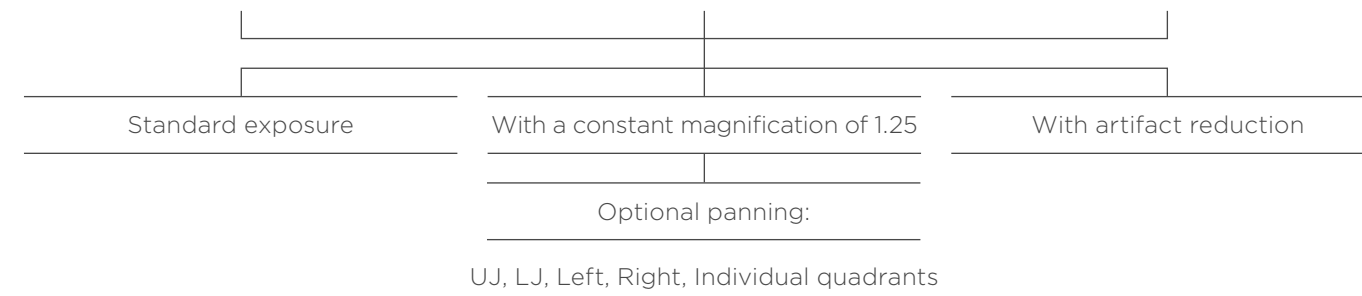
P12 thick slice in anterior tooth region

Optional panning:

UJ, LJ

Bitewing

BW1

BW2 anterior tooth region

Optional panning:

Right, Left

TMJ

TM1 lateral

TM2 axial**

Adjustable radiation angle:

With open and closed occlusion, with a slice position
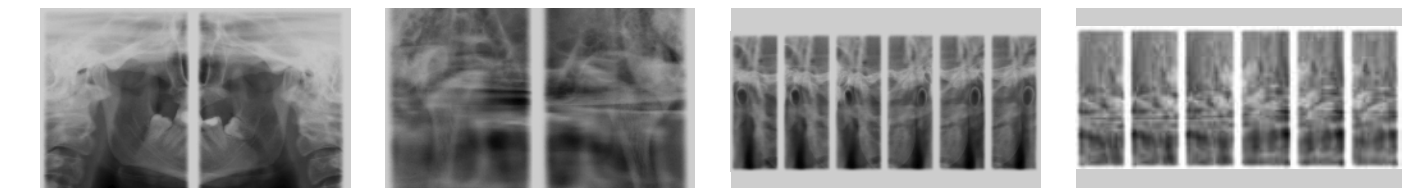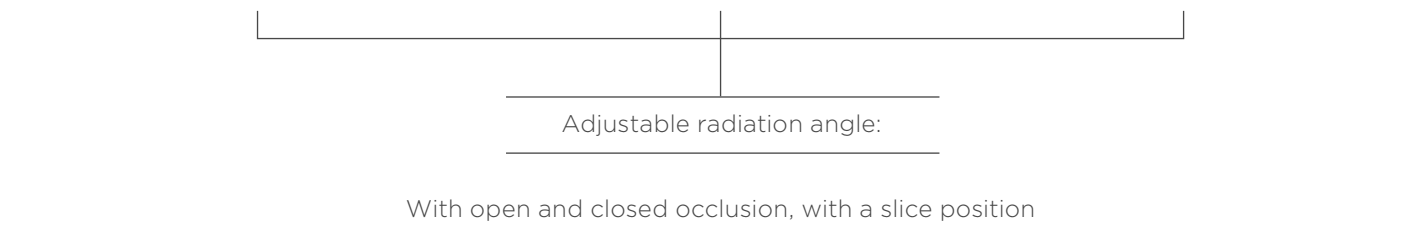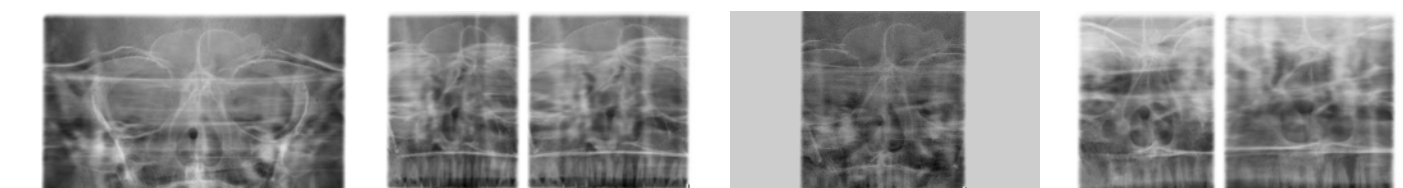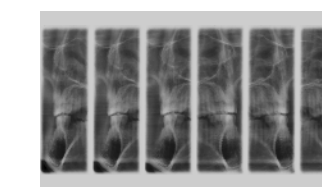

TM4**

TM5**

TM6**

Sinus

S1 jaw cavities

S2 jaw cavities twice**

S3 simple jaw cavities linear

S4 jaw cavities twice linear**

Multislice in posterior tooth region

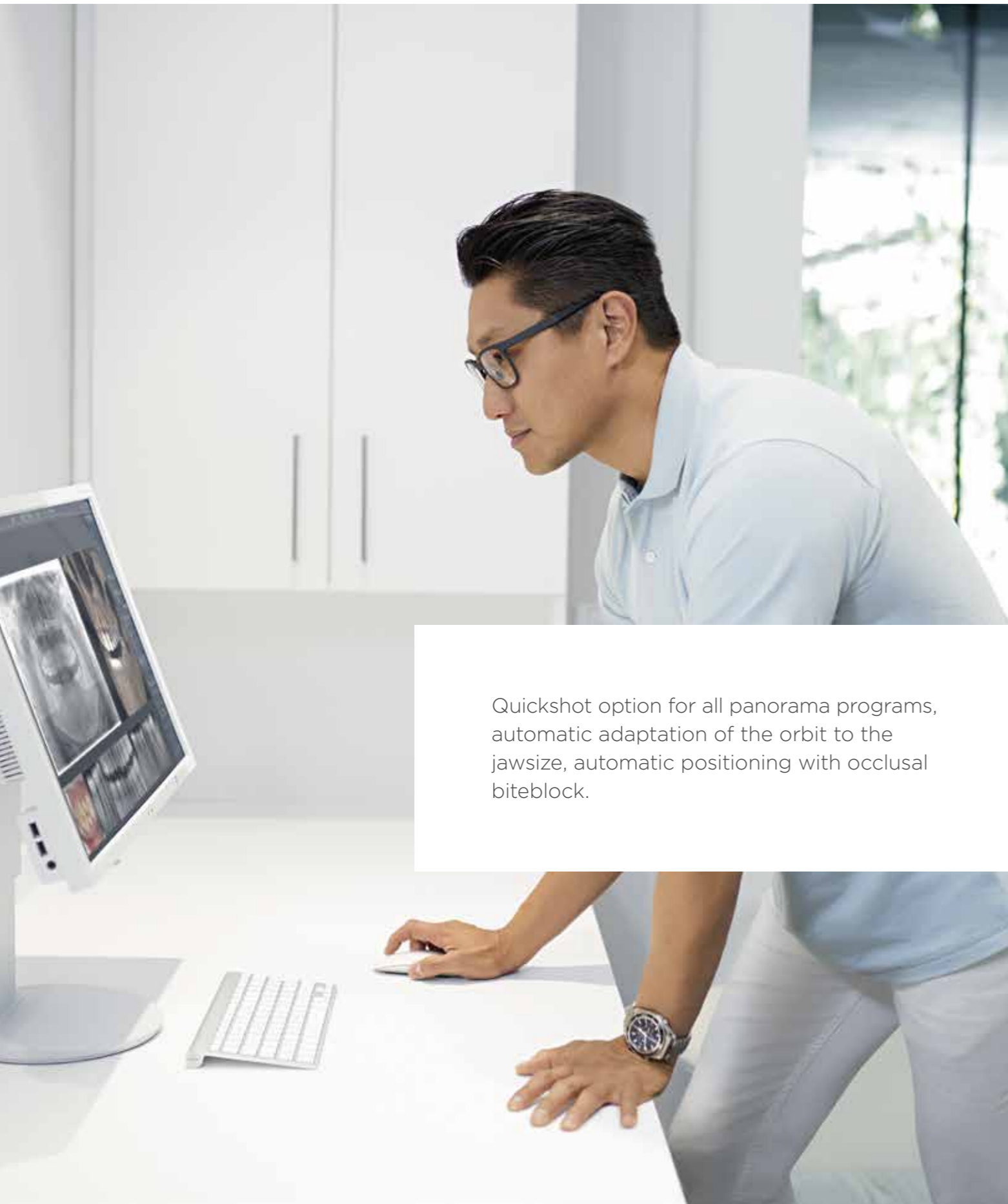
MS 1**

This overview shows all 2D programs and the related images of the ORTHOPHOS XG 3D. Differences from the Orthophos SL 3D are marked accordingly.

** Image not available with the Orthophos SL 3D

Quickshot option for all panorama programs, automatic adaptation of the orbit to the jawsize, automatic positioning with occlusal biteblock.

THE DENTAL
SOLUTIONS
COMPANY™

Procedural Solutions

Preventive
Restorative
Orthodontics
Endodontics
Implants
Prosthetics

Enabling Technologies

CAD/CAM
Imaging
Treatment Centers
Instruments

Dentsply
Sirona