



**ORTHOPHOS XG 3D**  
A hybrid solution from Sirona!

## The new ORTHOPHOS XG system with 3D.

The new ORTHOPHOS XG 3D combines the advantages of 2D and 3D into one comprehensive unit. With an extensive selection of panoramic and cephalometric programs to choose from, the right 2D diagnostic images are now augmented with the ability to capture 3D X-ray.

The 3D function increases diagnostic accuracy for all clinical needs and, when used in combination with CEREC, it offers new possibilities in implantology.

The new hybrid unit from Sirona requires about the same space as a traditional 2D X-ray machine, but now provides the advantages of 2D and 3D together in your practice while encouraging the lowest possible effective dose for the patient.

### Key advantages

- Simple patient positioning - the operator has a clear visual of the area to be scanned
- The Auto-Positioner enables the operator to take images with confidence
- Intuitive control with the Easypad touchscreen makes program selection fast and easy
- Automatic sensor rotation eliminates the need for manual sensor change
- Multiple 3D scan regions allow the operator to scan only the region of interest
- A short scan time ensures patient movement during the scan is kept to an absolute minimum
- Easy navigation of the 3D volume allows you to scan the volume quickly and with confidence



Visit  
[www.Sirona3D.com](http://www.Sirona3D.com)  
for more information

### Ease of operation

Easy-to-understand symbols, clear user guidance: from positioning to acquisition, your assistant controls the entire process via the Easypad - which provides all the necessary information, including bite block selection and patient positioning guidance. The adjustment of the collimator and the orbital curve is selected automatically based on image parameters.

### As individual as your patients and your treatment plans

The program settings adapt to the patient based on the built-in positioning and measurement features. Additional fine-tuning is intuitive, fast and easy.

### Immediate Feedback

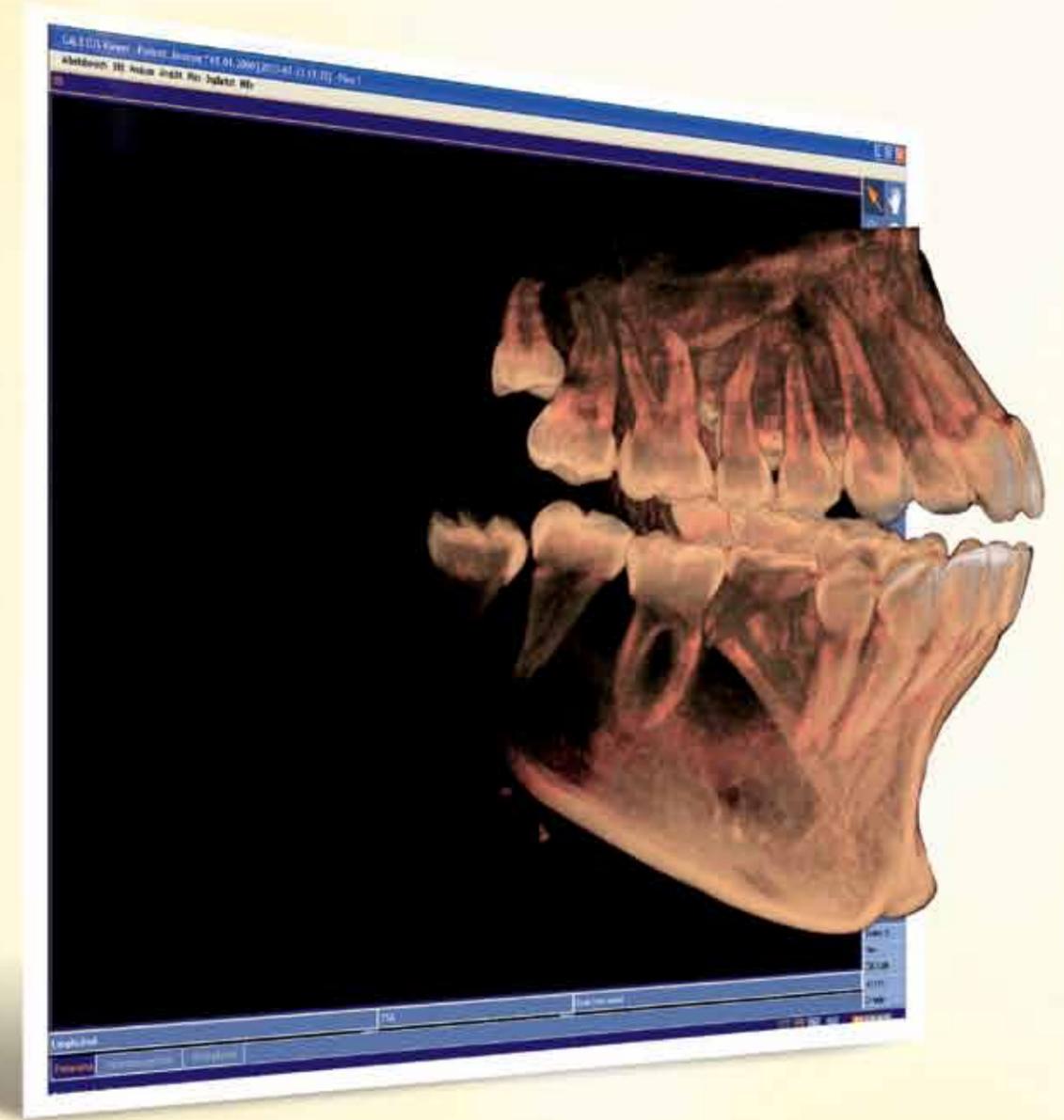
The 2D image is instantly available on the "Easypad" screen for confirmation and control. The image also remains stored in the unit's internal memory until it safely passes through the network and into the office imaging database.

## The basis for the new ORTHOPHOS: An outstanding hybrid concept.

ORTHOPHOS XG 3D is the result of Sirona's 100+ years of radiological expertise.

- The intuitive software and integrated clinical workflow makes it the ideal solution for your practice
- XG 3D provides the highest quality image with the lowest dose .
- The extensive range of panoramic and cephalometric X-ray programs facilitates accurate diagnosis for specialists as well as general practitioners.
- XG 3D has a field of view of 8 cm diameter by 8 cm height, allowing you to view the complete dentition using just one image.
- Proven advantages and new possibilities make the new XG 3D a secure investment for the future of your practice.

**High diagnostic accuracy**  
Superior 3D images for fast and accurate diagnoses and high clinical reliability.



### Lowest Dose

The extensive selection of programs for panoramic and cephalometric images, such as the Ceph-Quickshot program for children, ensures that your patients are exposed only to the amount of radiation necessary for the specific task.

### Automatic patient positioning

The occlusal bite block measures the inclination of the occlusal plane. The direction of travel is displayed and the unit stops automatically at the desired position, thus preventing incorrect positioning and reducing re-takes.

### Automatic sensor change

To switch between 2D and 3D sensor, your assistant simply selects the scan mode. This eliminates the risks associated with manual sensor change.

### Collimated Scan Region

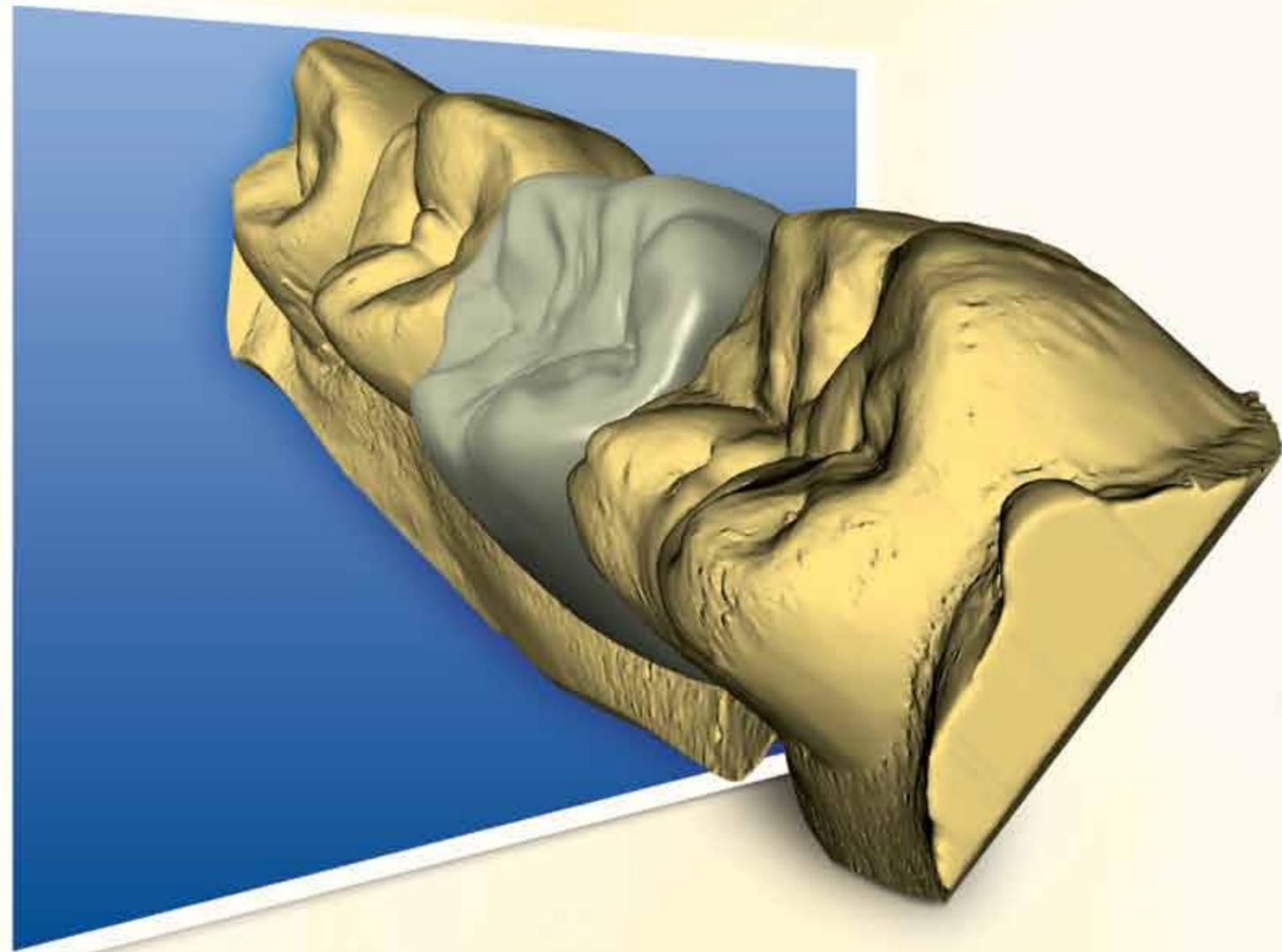
Collimation to the upper or lower jaw further reduces the radiation dose and allows the practitioner to scan only the region of interest.



2D sensor



3D sensor



INTEGRATED IMPLANTOLOGY

**Better implant planning:  
CEREC Integration provides visualization of proposed prosthetic!**

ORTHOPHOS XG 3D gives you the confidence you need to provide implants yourself or to increase the number of implants you place. This is made possible by the unique, simultaneous surgical and prosthetic implant planning with CEREC: the software combines the prosthetic proposal with the 3D x-ray data, allowing you to determine the exact position of the implant while considering both function and aesthetics.

- 360° rotation around the implant allows you to visualize the placement of the implant as planned
- Comprehensive implant library allows you to select the implant of your choice
- Order SICAT surgical guides from the software to place the implant precisely where you planned it

**Prosthetic planning**

Using the CEREC AC acquisition unit, the crown is designed based on the antagonist, soft tissue and neighboring teeth. With the CEREC or inLab software, it takes only a few clicks to create a morphologically correct and functional prosthetic proposal.

**Integrated planning**

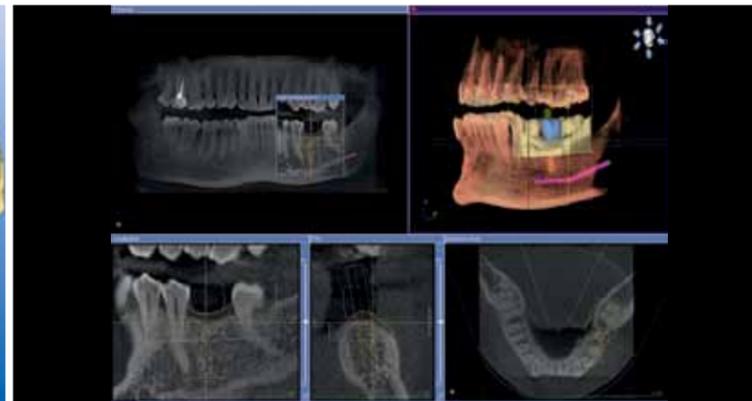
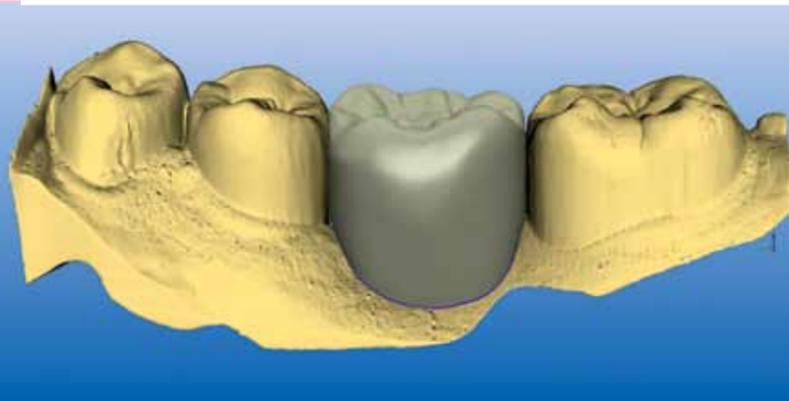
Supporting simultaneous prosthetic and surgical implant planning provides a revolutionary new approach to implantology. For the first time, crown design and the X-ray image are fused together in a single view. This ensures higher safety, fewer work steps, and fewer sessions. The 3D view enables the patient to easily visualize the proposed solution and understand the required treatment steps.

**Safe implementation**

You can order the precise surgical guide directly in the software. The precision of the SICAT surgical guides allows implant placement exactly where planned within the software, thus enhancing your ability to place implants accurately with ease, speed and a final outcome that offers the maximum convenience to the patient.

**Even more possibilities**

With the CEREC or inLab MC XL milling machine, you can create high-precision abutments and crowns with your digital dental lab.



## DIGITAL WORKFLOW

### Software in a new dimension: A quantum leap for your clinical workflow!

ORTHOPHOS XG 3D is equipped with the established GALAXIS 3D software that allows you to work directly with the image data in a diagnosis-oriented manner. Simply create findings - the software then saves them, including all windows and settings of the current view, so they are accessible at any time. With the optional REPORTER software, you can quickly and easily create radiological reports on the basis of the marked findings. In addition, the optional GALILEOS Implant software allows you to easily and quickly plan implants and order SICAT surgical guides directly in the software!

#### Networking

The DICOM-compatible X-ray software SIDEXIS XG controls your ORTHOPHOS and connects it with all elements of the digital practice, giving you immediate access to all the information you need.

#### Findings-oriented documentation

In the GALAXIS software, you can mark findings directly in the X-ray image, then save the documentation and call it up at any time. A very time and cost-effective solution!

#### Reporting without losing time

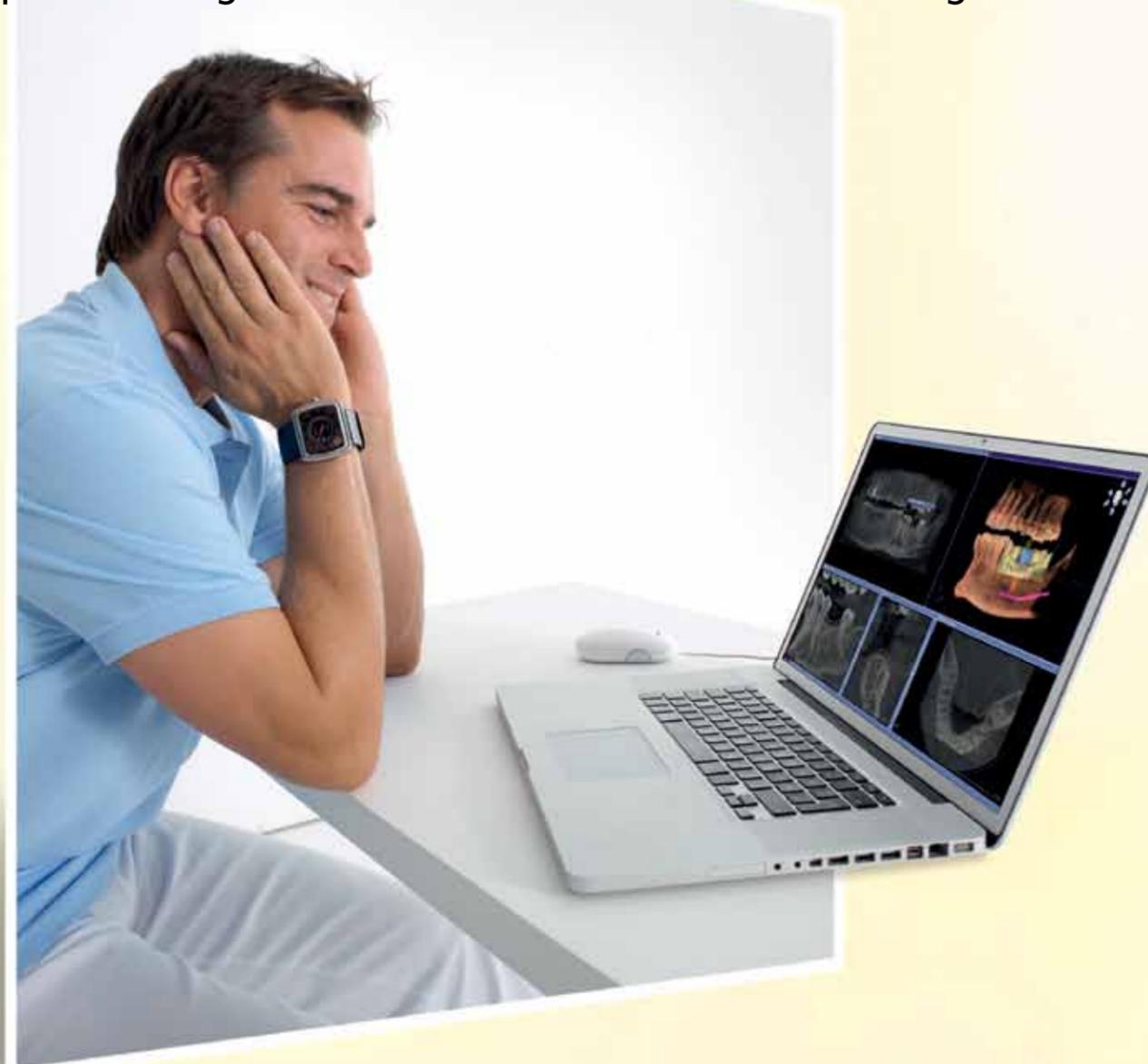
With the GALILEOS Implant software, you can quickly and easily create surgical reports that you can print. Alternatively, you can create a digital viewer with virtual planning and findings for your referrals.



## PATIENT COMMUNICATION

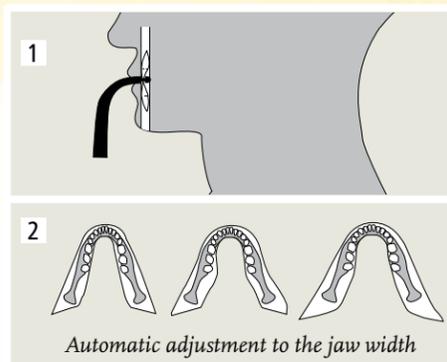
### Software features and workflow that increase case acceptance.

A panoramic or intraoral image does not always provide a clear diagnosis. What is the distance to the mandibular canal? How large is a cystic lesion? How much bone is available? ORTHOPHOS XG 3D increases clinical safety and your patients' trust. With 3D images, patients have a clear understanding of the diagnosis and treatment plan allowing them to make a faster decision to undergo treatment.



# ORTHOPHOS XG 3D – A systematic approach to high quality image creation.

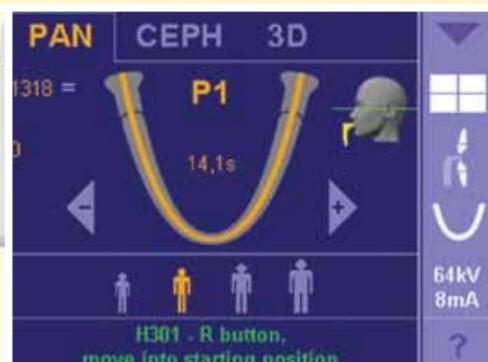
## Precise Positioning



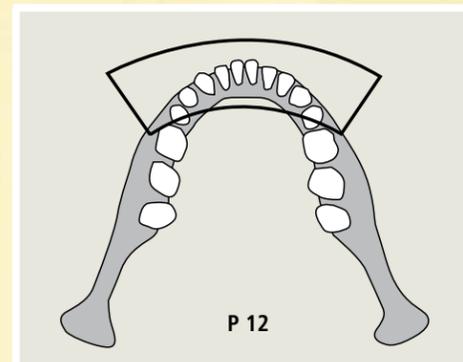
## Comfortable Stabilization



## Optimized X-ray Source



## Refined Focal Layers



## Ease of Operation



## Rapid Image Processing



### Auto Positioner ensures jaw is exactly in the sharp image layer!

- As with all Sirona panoramic equipment, only two positioning points need to be adjusted. The mid-sagittal plane and the Frankfort horizontal plane are aligned quickly using two laser positioning lines and the dark, scribed line on the bite block. The patient's front teeth are placed edge-on-edge in the grooved bite block establishing the correct positioning point, no need for a third light line, that is subjective to operator interpretation.
- Sirona has further simplified patient positioning with the Auto-Positioner (turn to page 13 for details).
- The ORTHOPHOS adapts the orbital curve to the patient's jaw size via the temple support so the molars and the anterior teeth are in the range of optimal focus.
- In special cases one-step fine tuning of the anterior jaw shape is possible.

### Small children (3'6") up to large adults (6'6") can be easily positioned in the unit.

- The patient looks toward the unit, into the mirror, allowing them to remain comfortably focused on keeping themselves still.
- The 3-point stabilization with bite block, forehead and temple support prevents movements and provides comfortable patient fixation.
- With the 3-point fixation the position of the patient is exactly determined and the measurements and settings will be saved for reproducibility, should additional images be necessary for follow-up treatment.
- After the image is taken the temple supports release automatically.

### The image quality is enhanced with automatic radiation management:

- Consistent X-ray beam with high-frequency generator.
- Automatic exposure control for ideal selection/adaptation of the radiation for different bone and tissue densities.
- Automatic increase in kV radiation quality, not quantity for spinal column compensation to maximize image quality in the anterior region.
- Exposure parameters built on the experience of more than 60,000 Sirona panoramic X-ray units in operation provide preset value pairs (kV/mA settings).
- "Quickshot" available as a selectable feature of panoramic or cephalometric exposures using the "Easypad".

### For specific diagnostic needs different 2D panoramic programs can be selected:

- "Standard" (orthoradial):** Fundamental diagnostic tool that provides sharp images of full dentition with minimized overlapping.
  - Artifact-free:** The focal path is offset slightly to avoid double projection of shadows, i.e. caused by metallic items in the patient's posterior teeth.
  - Constant magnification 1.25:** For basic 2D implant planning and diagnosis the focal path is modified slightly to keep the magnification factor at a constant 1.25 to 1.
  - The modified focal path for the constant magnification program (P1C) is also ideal for larger patients.
- Other examples:
- Thick slice in anterior region for anomalies (P12).
  - Programs for lateral and axial TMJ views with specific radiation direction and special orbital curve.

### Save time, avoid uncertainties, and eliminate misinterpretation!

- Immediate, exact positioning in the anterior plane without the third light beam.
- Automatic adjustment of the orbit to the jaw width.
- Easy selection of exposure parameters and programs on the Easypad.
- Fast confirmation image on the unit.
- Automatic diaphragm adjustment at program selection.
- Automatic selection of Pan/Ceph and 3D mode without changing sensors is available as an option.
- Imaging in three easy steps:
  - Select the exposure region (central volume or posterior volume)
  - Select the dose and collimation, if needed
  - Take the scan

### ORTHOPHOS XG 3D CCD sensors have a pixel size of 27 µm for Pan and Ceph.

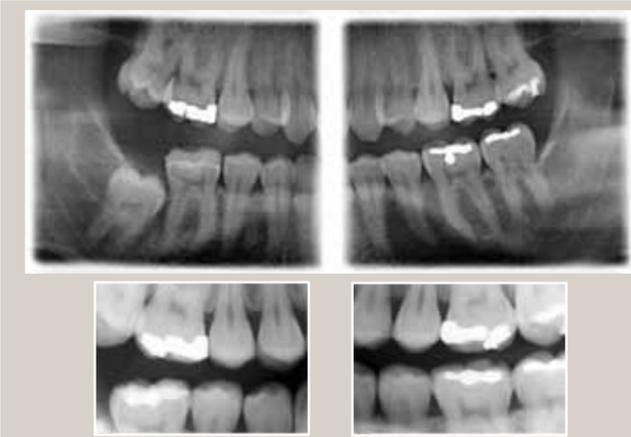
- The image is captured using a 16-bit system and automatically preprocessed to get the optimum quality image. Example: to see even the finest detail the image is shown at the highest number of gray scales between black and white regardless of over- or underexposure.
- The image data is stored in the ORTHOPHOS XG 3D until it is passed through to the network and into the office imaging database.
- ORTHOPHOS XG 3D connects directly into the office network: all PCs on the network can access the images and make the system ready for an exposure as long as they have SIDEXIS XG installed.
- The ORTHOPHOS XG 3D integrates with all major practice management software, including Eaglesoft\*, Dentrix\*, Practiceworks\*, and others.

\*Other company and product names mentioned herein may be trademarks of their respective companies. Mention of third-party products is for informational purposes only and constitutes neither an endorsement nor a recommendation.

# ORTHOPHOS XG 3D – Panoramic Bitewing Programs.



"We had a child on whom we couldn't take an intraoral bitewing image without the patient gagging or moving, so we tried the new bitewing program on our pan unit. The new bitewing program works very well. It provides a diagnostic image, in my opinion, quickly and easily for a patient that otherwise could not tolerate the procedure."  
Dr. Ryan Woodman - Matthews, NC

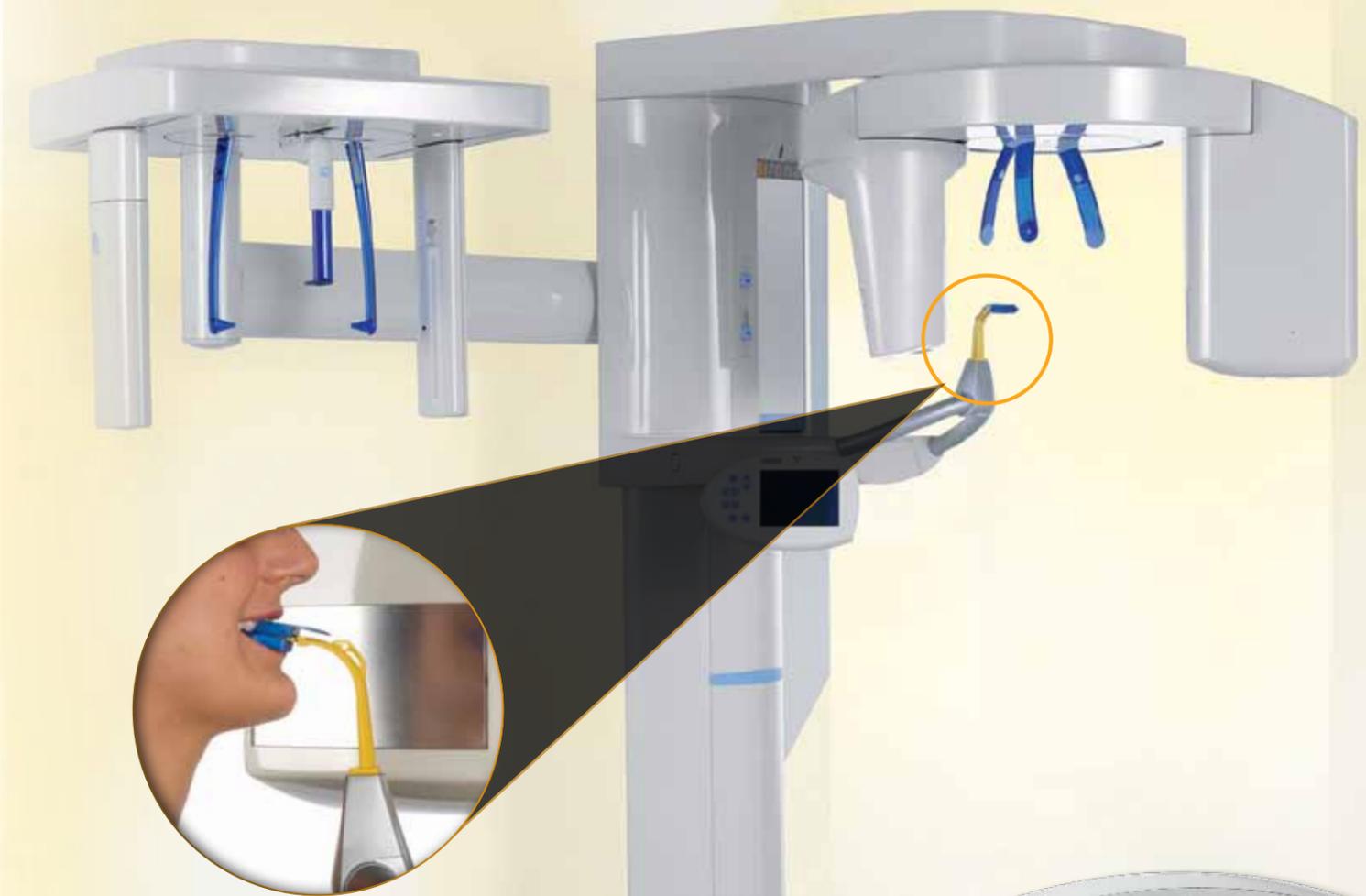


## Advantages of the BW1 Posterior Program:

- Larger area allows for additional diagnostic information compared to standard intraoral bitewings, as shown in the example to the left
- Great alternative for patients with challenging intraoral anatomy
- Right, Left or both sides can be selected

## Advantages of the BW2 Anterior Program:

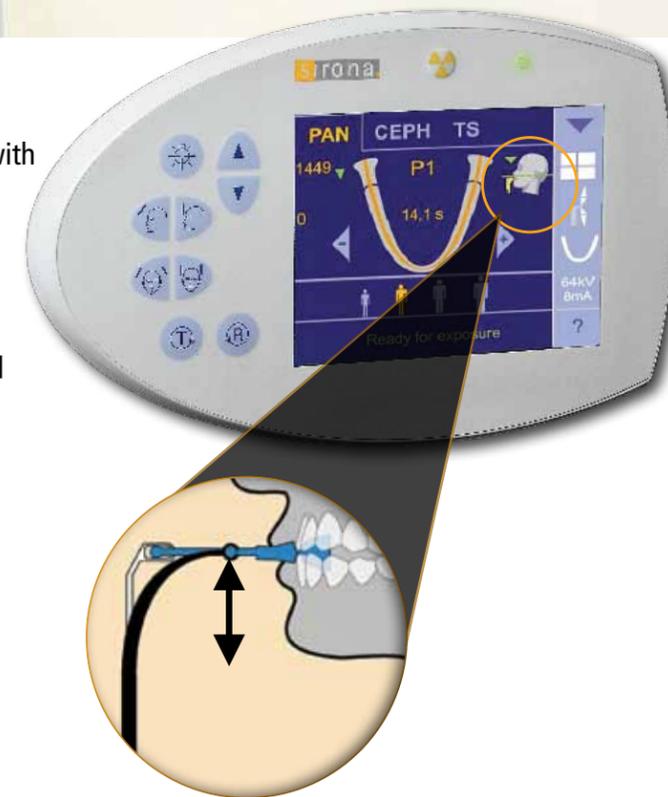
- Detailed overview image of anterior area is easy to take and very quick
- Can be used with edentulous positioning guide for anterior trauma patients
- Lower dose alternative to multiple occlusal images when focusing on anterior region



## TAKE IMAGES WITH CONFIDENCE

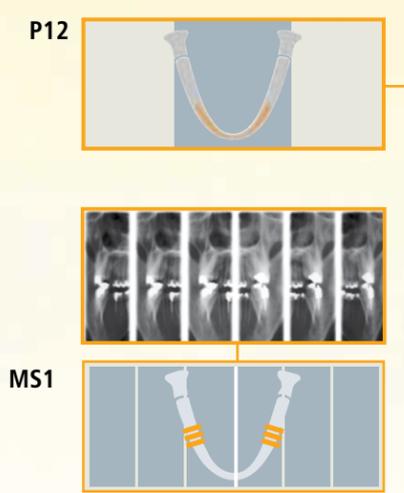
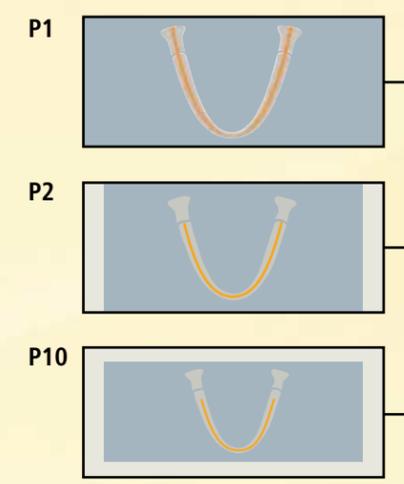
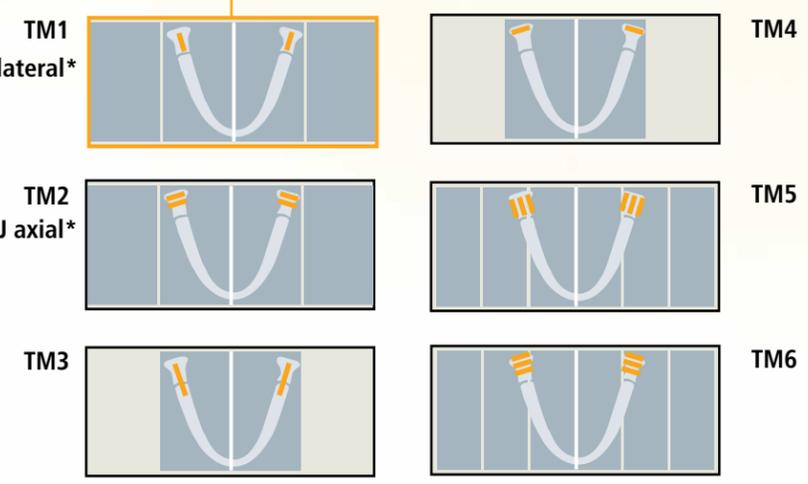
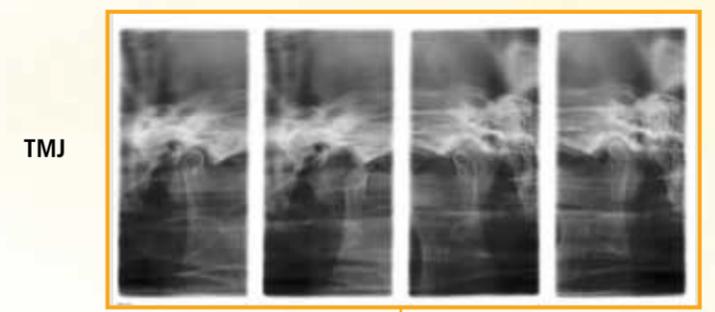
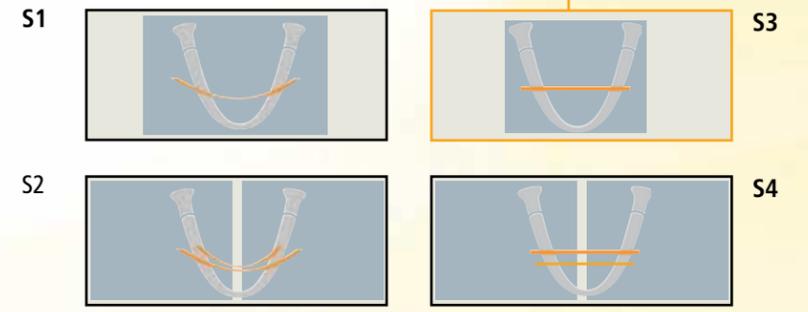
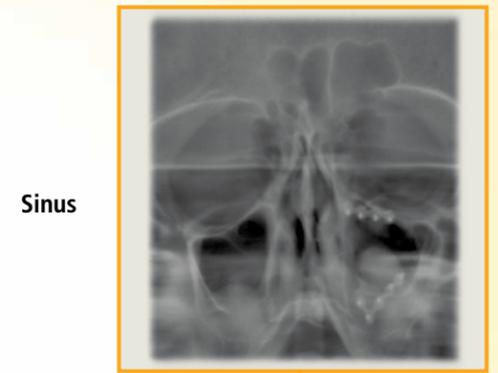
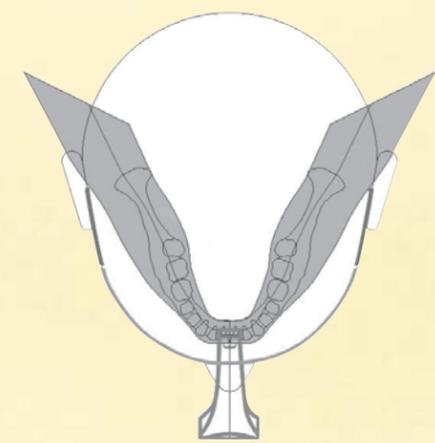
Sirona has simplified patient positioning for panoramic imaging with the new Auto-Positioner for the ORTHOPHOS XG 3D. The new Auto-Positioner measures the exact tilt angle of the patient's occlusal plane and automatically adjusts the height for an optimal panoramic image within the sharp layer. With guided height adjustment, the operator moves the machine up or down to tilt the patient's head to the correct angle according to occlusal plane.

- Precise Positioning Every Time
- Improves Clinical Workflow
- Reduces Retakes Due to Improper Positioning
- Eliminates a Step in Imaging Process

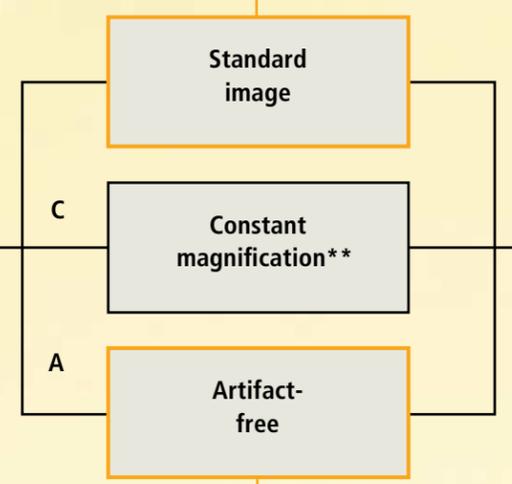


# ORTHOPHOS XG 3D – ALWAYS THE RIGHT CHOICE

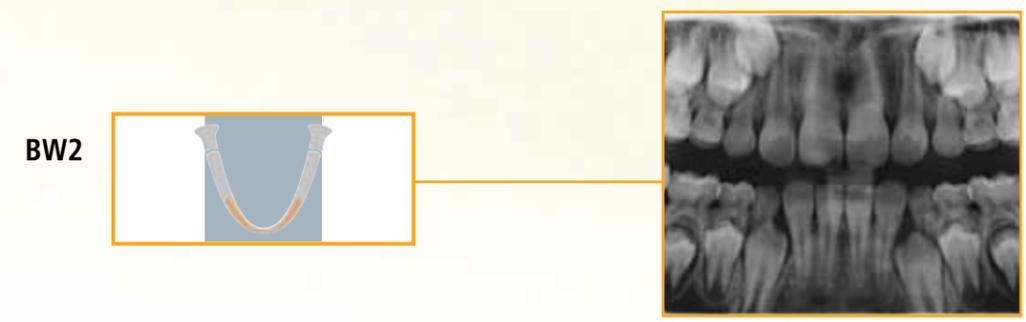
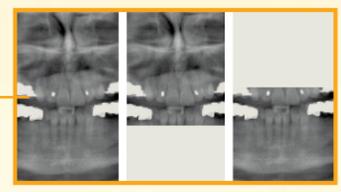
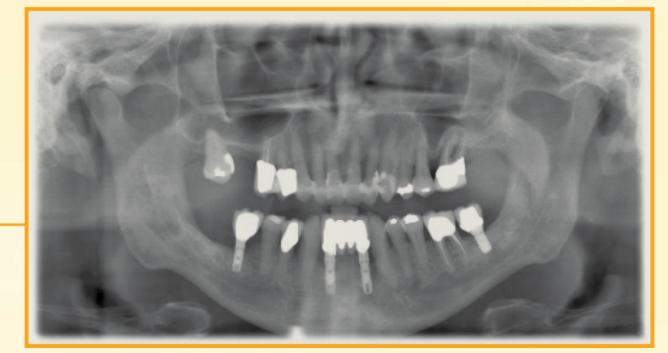
## Intuitive program selection for reliable diagnosis.



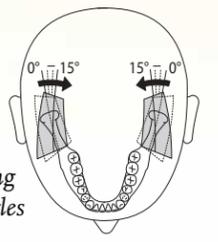
Transversal multi-slice posterior teeth



Quadrant selection for reduced radiation



\* With closed or open occlusion, single layer or multilayer TMJ exposures. The range of these programs are now expanded to include artifact-free versions along with the ability to select slice angles of 0°, 5°, 10° or 15°.



Additional programs:  
Cephalometric X-ray: (see page 14/15)

\*\*The modified focal path for the constant magnification program (P1C) is also ideal for larger patients.

THE CEPHALOMETRIC EXTENSION

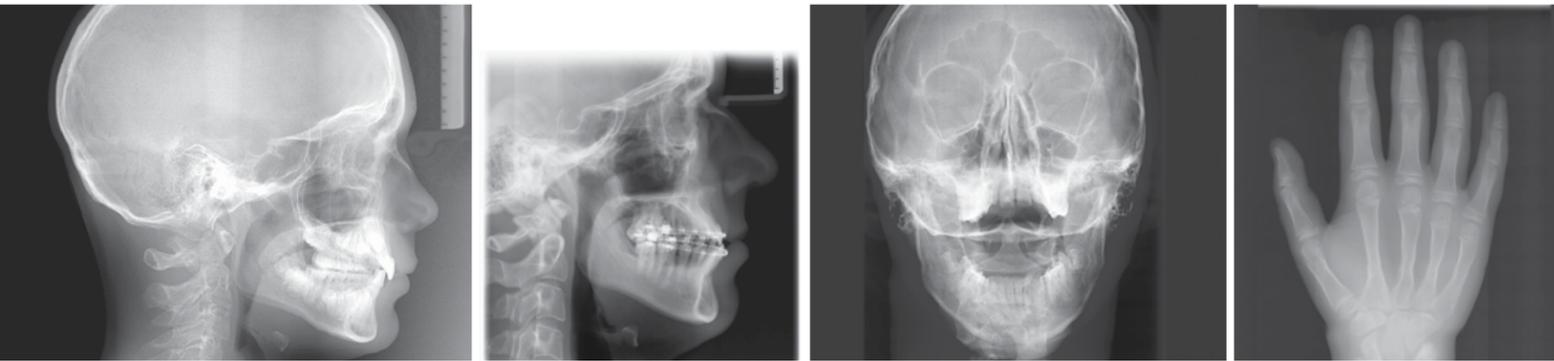
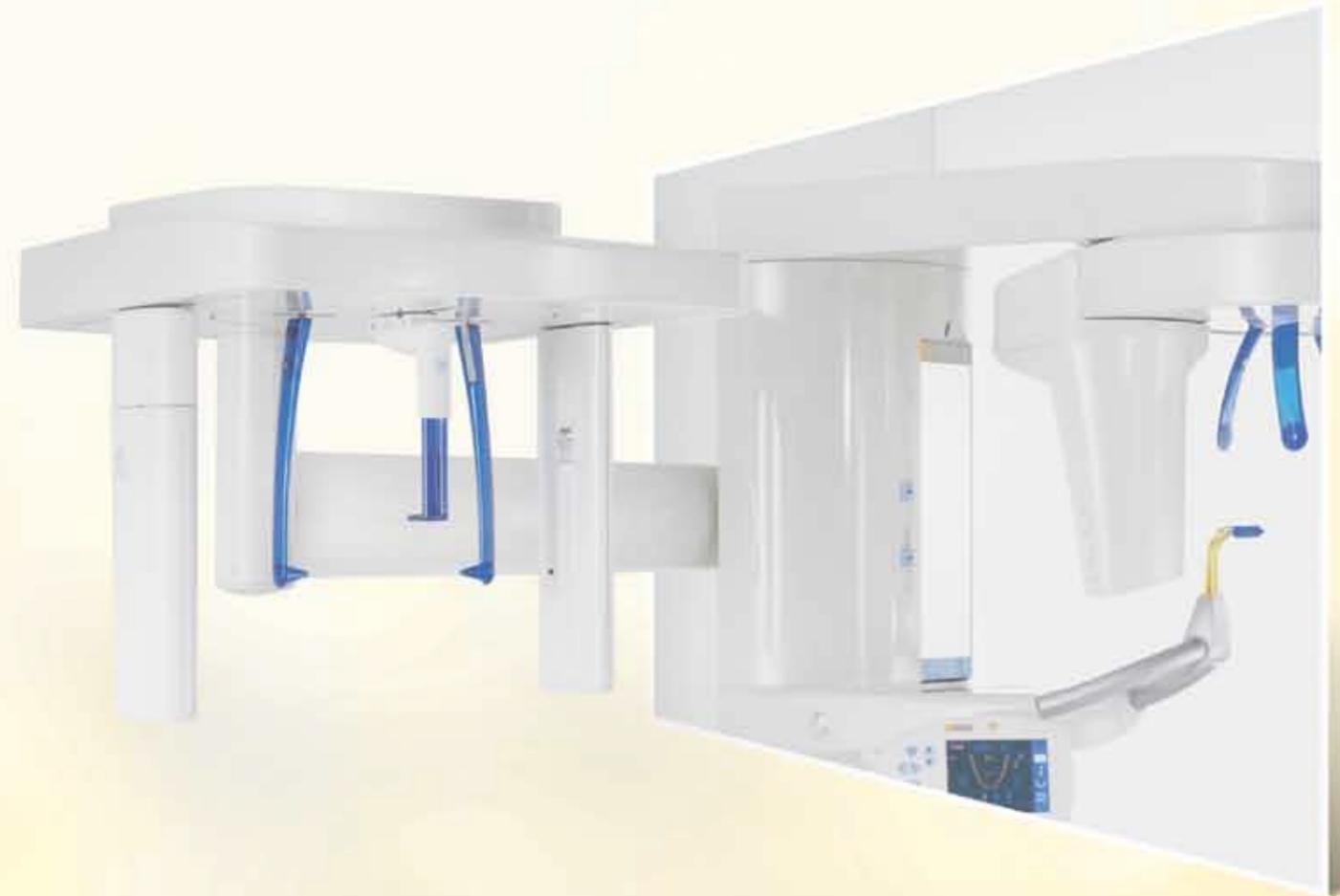
# The optimum choice for orthodontists and oral maxillofacial surgeons: ORTHOPHOS XG 3D.

Trying to visualize displaced or impacted teeth in anatomic relation without overlays? Clearly identify and differentiate root resorption? Better diagnose potential failure and eruption? ORTHOPHOS XG 3D offers new possibilities: you can take advantage of the benefits of 3D x-rays to diagnose difficult clinical situations. In all other situations, you benefit from the proven 2D high resolution images with minimized radiation exposure.

ORTHOPHOS XG 3D Ceph is adaptable to your unique patient needs and the special workflow of the orthodontic practice.

**Low radiation dose**

Radiation exposure can be further reduced in special 2D programs, such as the Quickshot function or the pediatric program with horizontal collimation to protect the eye lens. Automatic adaptation of the focal layer to align with various shapes of the patient's jaw is also available.



**Automatic sensor change**

Selecting the corresponding symbol moves the right sensor into the correct position - for CEPH, panoramic or 3D. This saves time and prevents damage to the sensor.

**Extension of 2D programs**

The cephalometric extension provides many special projections for lateral, symmetrical (p.a. or a.p.) and carpus exposures. Other special exposures such as sub-mental vertex are also possible. Cephalometric unit accommodates standing patients up to 6'3" tall. Ceph lateral can also be collimated to your preference of either 18 or 30 cm.

**Panoramic and cephalometric X-rays**

With the option of "Quick Shot", automatic diaphragm adjustment, SIDEXIS Ortho template, and controllable Pulse/Pause ratio, shorter exposure cycles are achieved.

**Shorter exposure cycles**

The function Panoramic, Cephalometric, Hand/Wrist (Carpus) as a group allows shorter cooling time between exposures.



**Perfect workflow**

The SIDEXIS XG software is compatible with all common orthodontic analysis software programs. You can even have 3D models created by third parties on the basis of the 3D data.

# ORTHOPHOS XG 3D – FLEXIBLE X-RAY IMAGING

## The right choice in any situation.

### Technical data - 2D Applications

Overview of performance features	Specifications
Radiation generator	Multipulse generator (max. 120 kHz)
X-ray tube	SR 90/15 FN
Focal spot size according IEC 336/82	0.5 mm x 0.5 mm
Total filter	2.5 mm AL
Tube voltage	60–90 kV
Tube current	3–16 mA
Nominal voltage	230–240 V, 50–60 Hz
Nominal current	12 A
Line internal resistance	max. 0.8 Ohm
Fuse	16 A slow blow
Power consumption	2.8 kW
Permissible line voltage fluctuations	± 10 %
Panoramic exposure time (P1)	14.2 s
Panoramic exposure time (P1), "Quickshot"	9.1 s
Range of height of bite block	2'8" - 6'1"
	Ceph
Radiation time	9.4 s
Radiation time "Quickshot" 18x24 cm	4.7 s
Effective exposure time	approx. 270 ms

### Technical data - 3D Applications

Overview of performance features	Specifications
Image volume	8 cm x 8 cm (diameter x height)
3D resolution: isotropic voxel size	0.2 and 0.1 mm, respectively
Scan time / exposure time	14 s/2–5 s
Reconstruction time / visualization time	1.5/4.5 min
Patient positioning	Standing, sitting
X-ray tube assembly	60 kV–90 kV, 3 mA–16 mA
Effective dose	32 – 94 µSv

Visit [www.Sirona3D.com](http://www.Sirona3D.com) for more information

### Technical features

- Centralized control via "Easypad" with full-color touch screen
- Intuitive program structure
- Image preview on the "Easypad" screen
- Remote included with 33' cable
- 90 kV high-frequency generator
- Automatic adaptation of the focal layer to the individual jaw size of each patient (jaw shape in the anterior region can also be specified)
- Spinal column compensation via automatic kV increase
- "Quickshot" mode for Panorama and Ceph
- CCD sensor technology with high-speed interface, 27-µm pixel size and image acquisition in 16-bit technology; data transfer 100 Mbit/sec., Ethernet
- Integrated power computer and Can-Bus architecture
- Upgradable software
- Ceph upgradable to left or right side
- Four versions available:
  - ORTHOPHOS XG 3D PAN
  - ORTHOPHOS XG 3D CEPH
  - ORTHOPHOS XG 3D ready PAN
  - ORTHOPHOS XG 3D ready CEPH
- SIDEXIS XG image management and analysis software

### Programs

#### Panorama programs:

- Standard panorama (P1)
- Standard panorama without ascending branches (P2)
- Pediatric (P10)

#### Each available as:

- Standard image
- Constant magnification (1.25:1)
- Artifact-free
- Sectional exposure choices (upper, lower, L, R, Quadrant)
- Thick layer in the anterior region for anomalies (P12)
- Bitewing Posterior (BW1)
- Bitewing Anterior (BW2)

#### Lateral temporomandibular programs:

- With open and closed occlusion
- Single layer
- Multilayer

#### Axial temporomandibular programs:

- With open and closed occlusion
- Single layer

#### Sinus programs:

- Maxillary sinus (two images - curved or straight)
- Paranasal sinuses

### CEPH programs:

- CEPH lateral
  - CEPH symmetrical p.a.
  - CEPH symmetrical a.p.
  - Carpus/(hand/wrist)
- Additional projections possible

### 3D Programs

- Five scan regions:
  - Anterior, Left and Right Molar, Left and Right TMJ

### 3D Views

- Partially tilttable 2D slices, TSA, LSA, axial, sagittal, coronal, 3D model, 1-click OP reports, implant-oriented



### 3D as a future option

You don't need 3D yet? Then it's best to purchase an ORTHOPHOS XG 3D Ready unit - as it can be upgraded to ORTHOPHOS XG 3D at any time.

### Space requirements

The ORTHOPHOS XG 3D requires a space of 50.4" x 55.6" (1280 x 1411 mm)

### Space requirements with Ceph arm

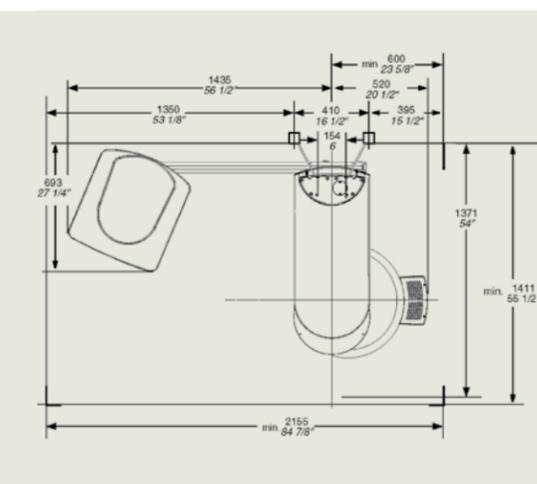
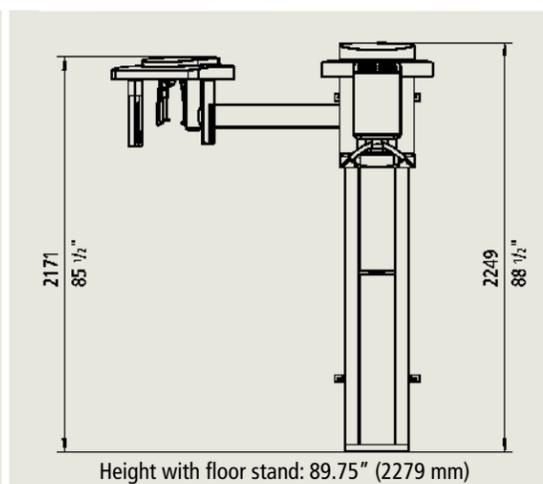
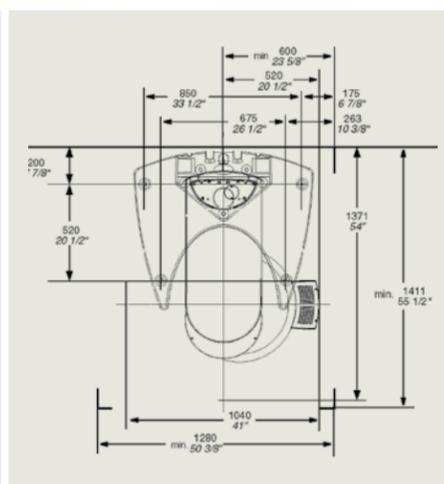
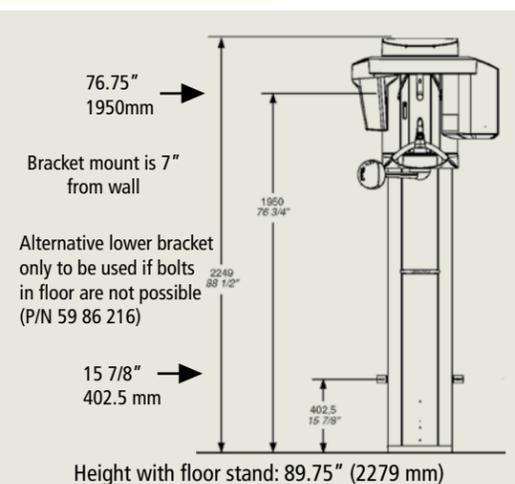
With the Ceph arm (mounted on the left or right, as desired), the space requirement increases to 84.8" x 55.6" (2155 x 1411 mm).

### Customization

ORTHOPHOS XG 3D is suitable for X-raying patients in wheelchairs.

### Stable floor stand

We can also offer you a very stable floor stand if no wall is available for mounting ORTHOPHOS XG 3D (PAN Only).



**SIRONA – UNIQUE EXPERTISE IN DENTAL EQUIPMENT, WORLDWIDE REACH**

Sirona develops and manufactures a comprehensive range of dental equipment, including CAD/CAM Systems for dental practices and laboratories, Instruments, Treatment Centers and Imaging Systems. Sirona manufactures high technology products that guarantee ease of use and a high return on investment – for the good of your practice and for the benefit of your patients.

**We shape the future of dental technology. Sirona.**



INSTRUMENTS | TREATMENT CENTERS | IMAGING SYSTEMS | CAD/CAM SYSTEMS

For additional direct digital diagnostic imaging capabilities,  
ask your dental dealer about the rest of the Sirona Imaging product family.



ORTHOPHOS XG 3



ORTHOPHOS XG 5



GALILEOS 3D IMAGING



Intraoral Solutions