MORITA

Veraview X800



Thinking ahead. Focused on life.



Veraview X800

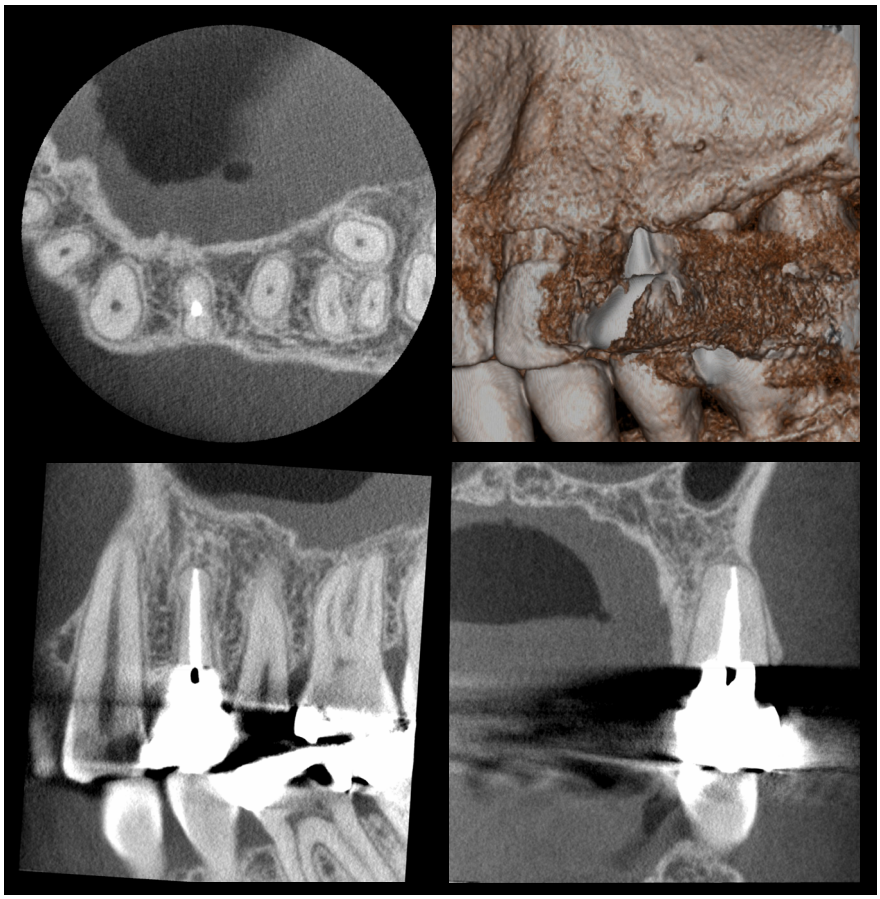
The New Frontier for Dental Imaging

The Veraview X800 is an all-in-one dental X-ray unit that produces stunning images for panoramic, cephalometric, and CBCT evaluation.
High resolution, this unit offers a minute voxel size of just 80 µm and features a horizontal X-ray beam for artifact reduction. Two exposure modes offer control and flexibility with a 360° high definition scan, or a faster 180° rotation with reduced dose. With a range of image sizes and unique features, the Veraview X800 has reached the pinnacle of dental imaging technology.

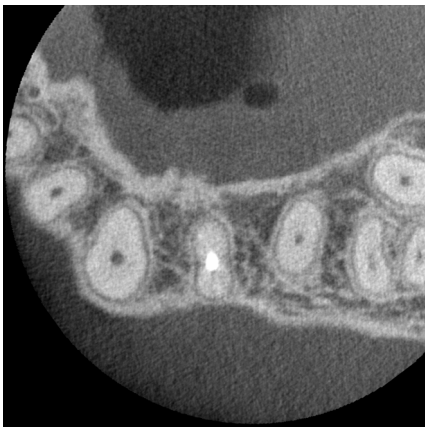
GOLD AWARD 2017



High Resolution Images



Ø 40 x H 40 mm High resolution (80 µm)



High resolution (80µm)



Standard resolution (125 µm**)

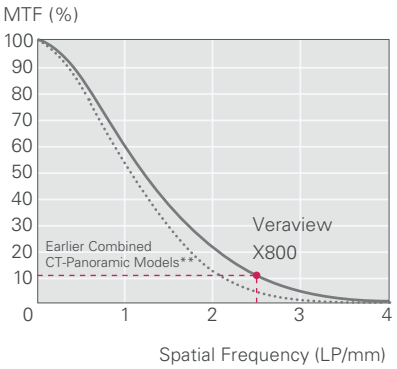
High-resolution, limited-field CBCT Imaging

For FOV Ø40 × H40 exposures, the voxel size is 80 µm and resolution is 2.5 LP/mm. As shown in the examples above, artifacts are reduced using 80 µm as compared to 125 µm voxels.

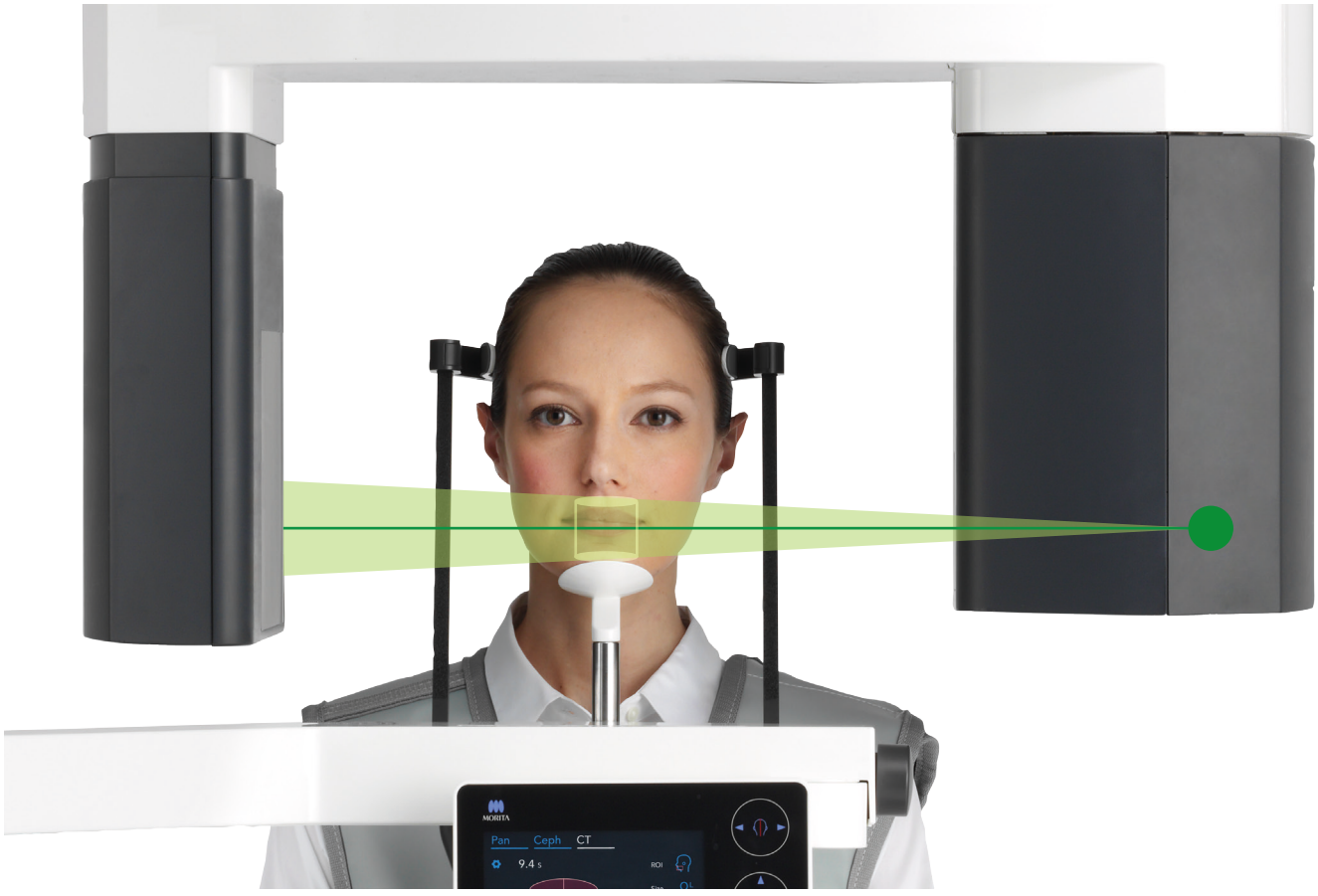
*Spatial resolution indicates how small objects can be and still been discriminated visually. This is called spatial frequency and is usually expressed as "line pairs per millimeter (LP/mm)". This indicates how many pairs of white and black lines can be discriminated within 1 millimeter; the higher the number, the greater the resolution. MTF (Modulation Transfer Function) is one way to objectively evaluate the line-pair resolution and objectively expresses how many line-pairs and at what level of contrast can be discriminated. Generally, if MTF is 10%, naked eye discrimination is possible. Spatial resolution does not depend only on voxel size.

**Veraviewepocs 3D Series

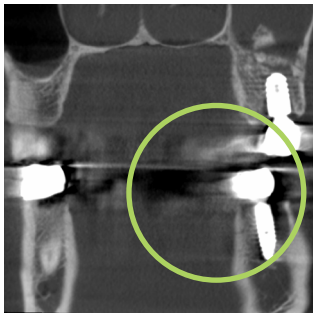
Spatial resolution*



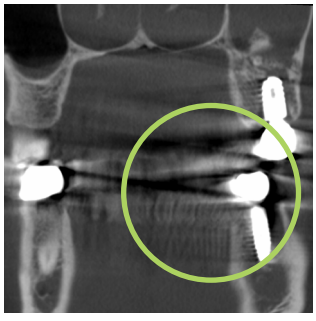
Horizontal X-ray Beam



Horizontal X-ray Beam for Minimal Artifacts
For CBCT exposures, the x-ray beam is horizontal during emission which minimizes artifacts and reduces distortion.

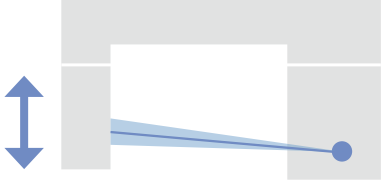


CBCT Image (horizontal beam)

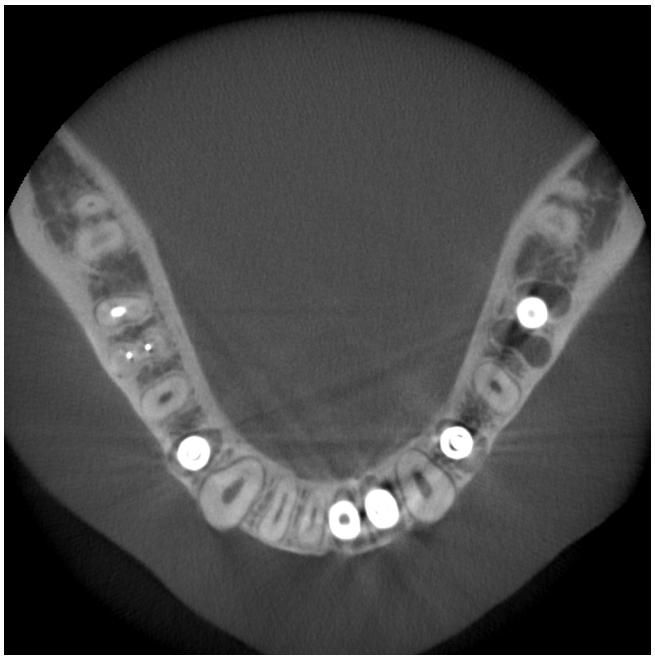


Veraviewepocs 3D series Image (Raised Beam)

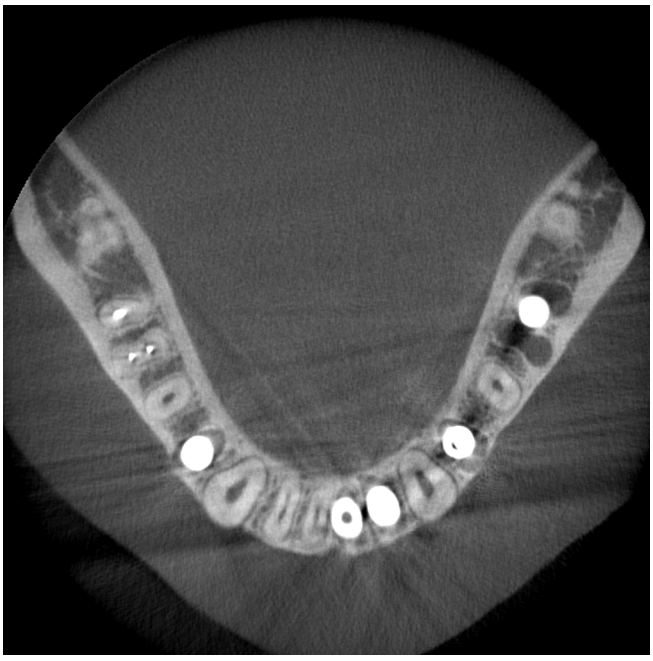
Adjustable for Panoramic Exposures
By shifting the Flat Panel Detector (FPD), the angle of the X-ray beam can be adjusted from horizontal (for CBCT exposures) up to 5° for panoramic exposures. This slight adjustment suppresses the hard palate during a panoramic and ensures high quality for both image types.



360° Scan

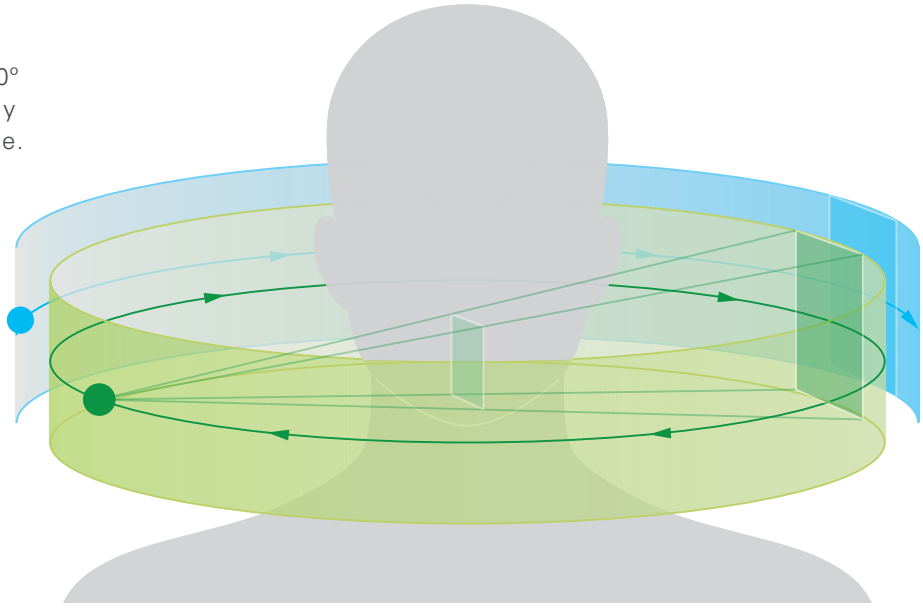


360° Mode Image

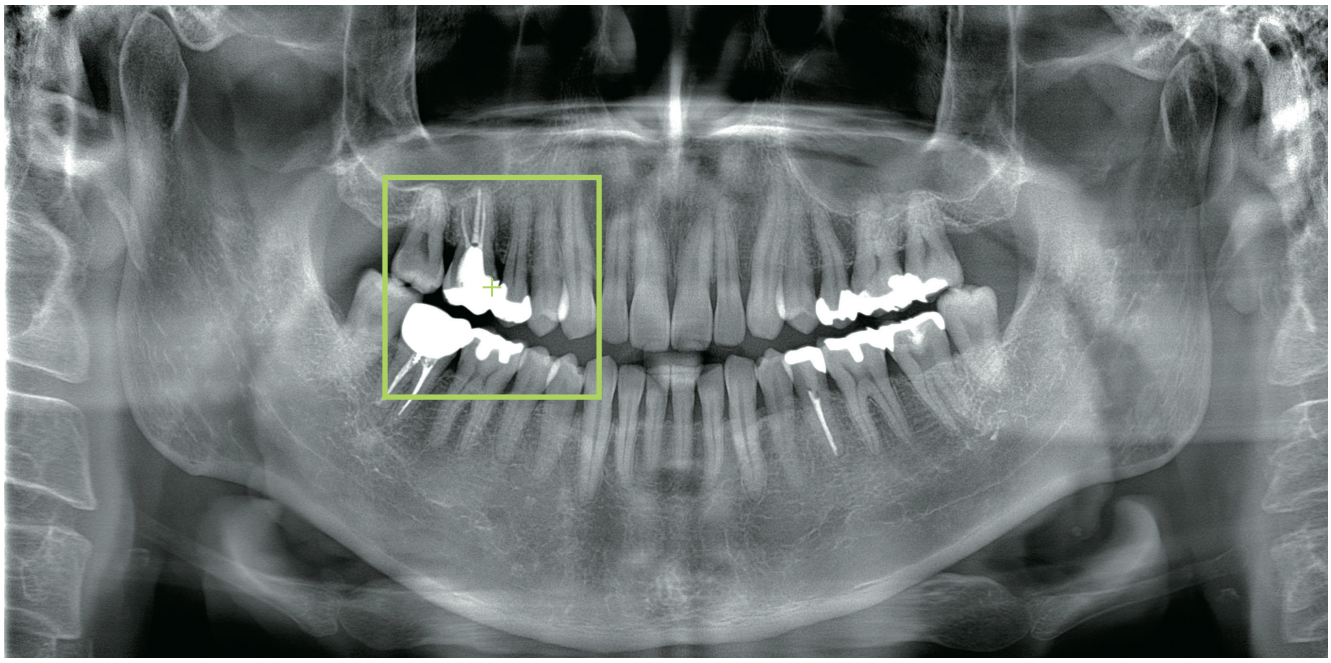


180° Mode Image

360° & 180° Exposure Modes
Depending on the diagnostic purpose, the 360° mode can be used for greater detail or the 180° mode can be used for lower X-ray dose and a quicker exposure time.



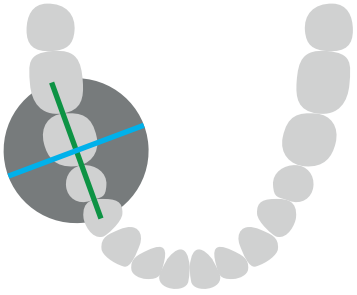
CBCT Positioning with Scout



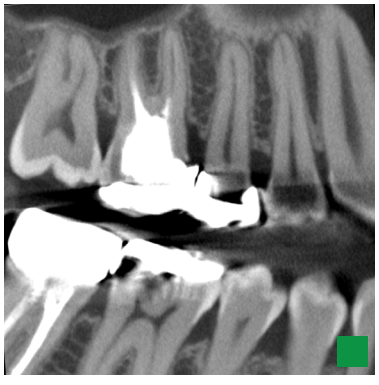
Panoramic Image



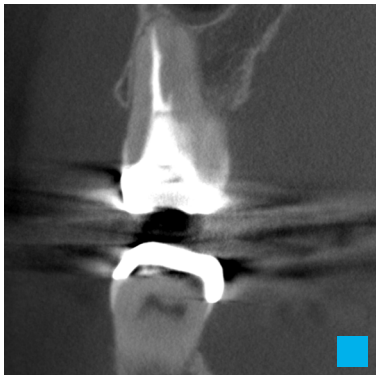
Axial Section Image



Panoramic Scout
By specifying the region of interest in a panoramic image, positioning and exposure for a limited field CBCT is very simple. This reduces stress for the patient.
After taking a CBCT exposure, double click a cross mark on the panoramic image to display the CBCT data for that region.



Sagittal Section Image

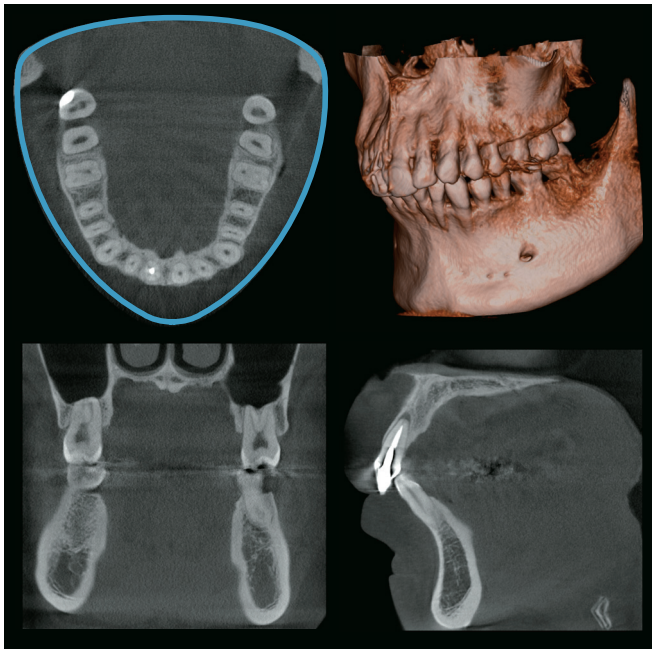


Frontal Section Image

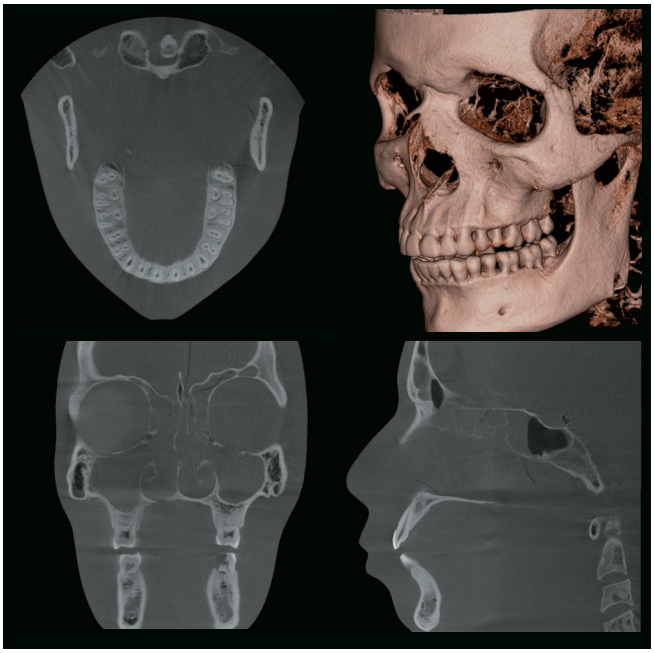


Two-direction Scout
The region of interest is specified by taking lateral and frontal scout images. These images are used to execute accurate positioning for a limited field CBCT exposure.

Various Fields of View

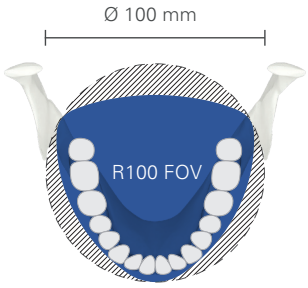


Dental Arch FOV (R 100 x H 80 mm)



Ø 150 x H 140 mm

Dental Arch FOV Function
A uniquely shaped field of view (FOV) with a Ø100 mm encompasses the entire dental arch. Imaging of the entire arch can be executed with less X-ray dose by excluding area outside the region of interest.



Maximum FOV Ø150
The X800's largest field of view, Ø150, allows a scan of the entire jaw region which is useful for orthodontic, TMJ and occlusal observation and treatment.

Dose Reduction Function
Patient X-ray dose can be reduced by as much as 40%* by lowering the amount of radiation used for areas with greater transparency.

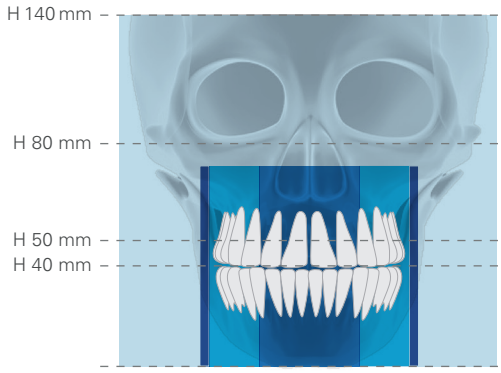
* Compared to when the Dose Reduction function is turned OFF.

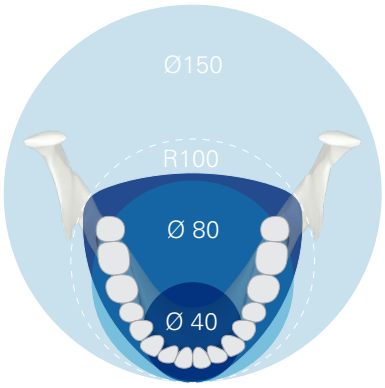
FOV	Voxel Size	180° Mode	360° Mode	F40	R100	F150
Ø 40 × H 40 High Res	**0.080 mm**	○	○	○	○	○
Ø 40 × H 40	0.125 mm					
Ø 40 × H 80						
Ø 80 × H 40	0.125 mm	○	○	–	○	○
Ø 80 × H 50						
Ø 80 × H 80						
R 100 × H 40*1	0.125 mm	○	–	–	○	○
R 100 × H 50*1						
R 100 × H 80*1						
Ø 150 × H 50*2	0.320 mm	–	○	–	–	○
Ø 150 × H 75*2						
Ø 150 × H 140*3						

*1 R100: Dental Arch FOV (Ø100 equivalent) *2 Data used equivalent to 180 degree exposure.
*3 Two 360 degree exposures, top and bottom. Data used equivalent to 180 degree exposure.

Zoom Reconstruction Function**
For the first time, Morita's zoom reconstruction feature is available on a multi-functional unit. After taking an image with a voxel size of 125 µm, reconstruction can be repeated for a higher resolution of 80 µm voxel size without retaking the exposure.

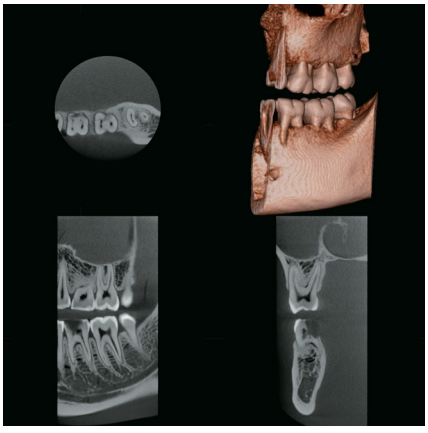
** This function cannot be used for Ø150 exposure.



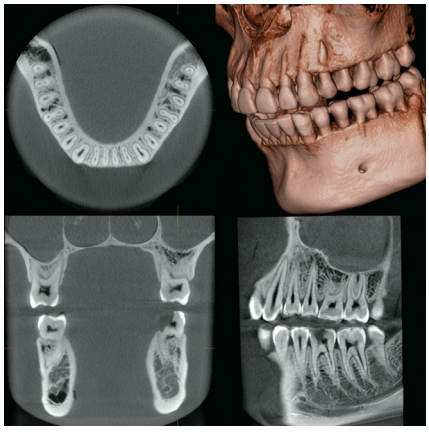


Multiple Fields of View

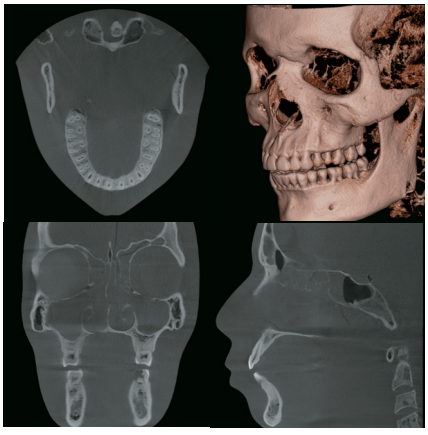
Veraview X800 offers a total of 11 different FOVs from Ø40 up to Ø150. This unit is appropriate for a variety of specialties and applications such as orthodontics, implantology, periodontics, and endodontics.



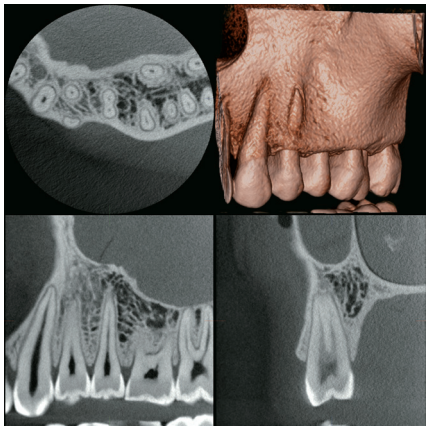
Ø 40 x H 80 mm



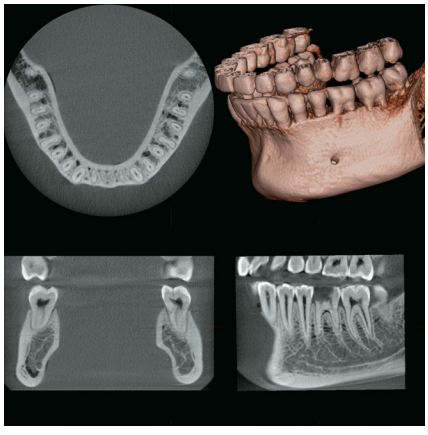
Ø 80 x H 80 mm



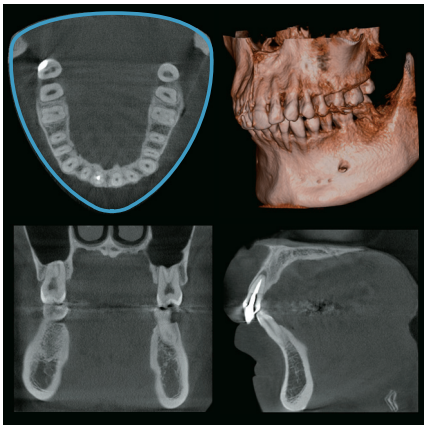
Ø 150 x H 140 mm



Ø 40 x H 40 mm

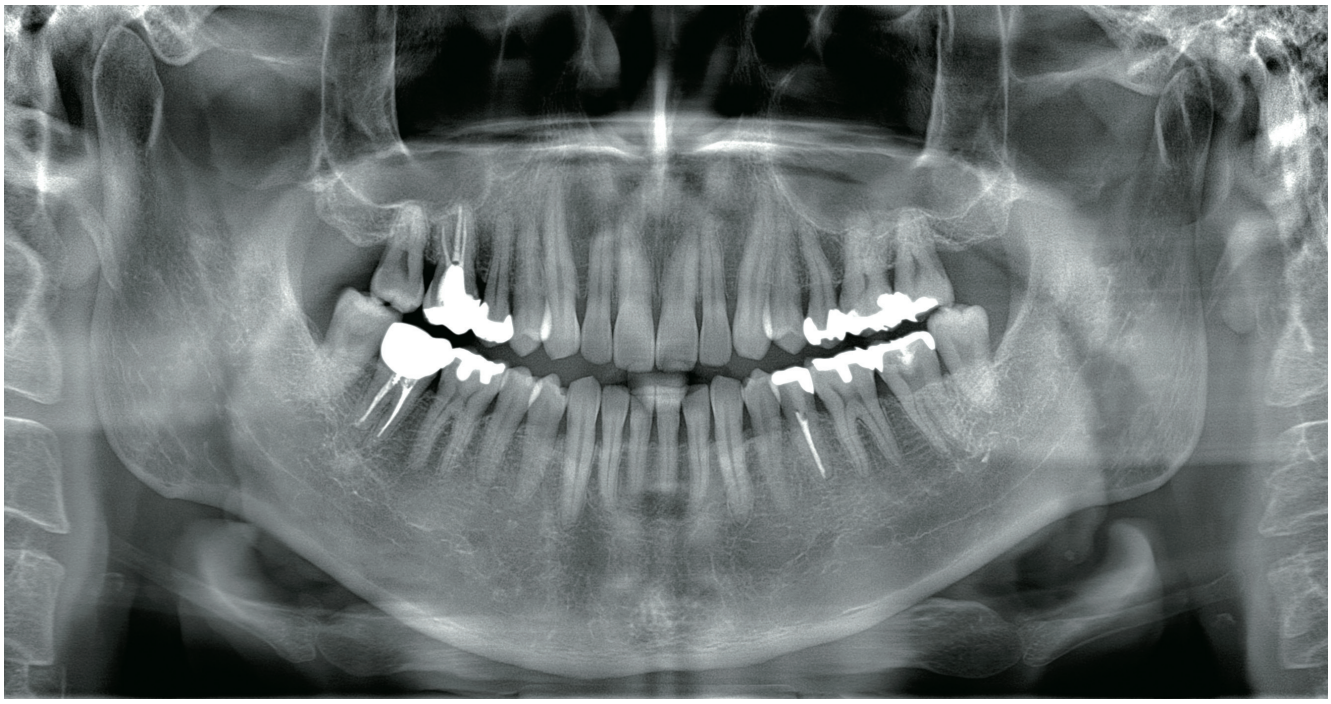


Ø 80 x H 50 mm



Dental Arch FOV (R 100 x H 80 mm)

Panoramic



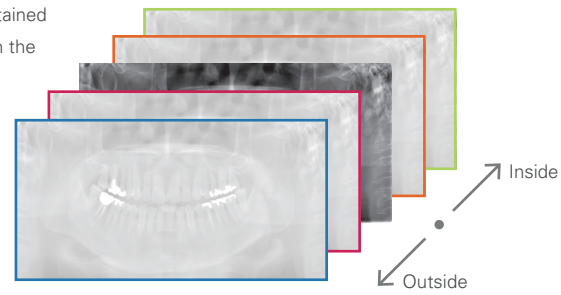
AFP + AGS + AIE-HD

Panoramic Image - Consistent Image Quality and Clarity

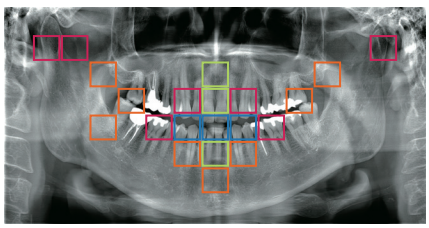
Various functions such as AFP (Adaptive Focal Point), AGS (Adaptive Gray Scale), and AIE-HD (Auto Image Enhancement – High Definition) can be combined to obtain images uniformly in focus with the areas of interest clearly observable. Additionally, the clinician may choose between three types of image-layer orbits to suit the individual patient's dentition.

AFP (Adaptive Focal Point)

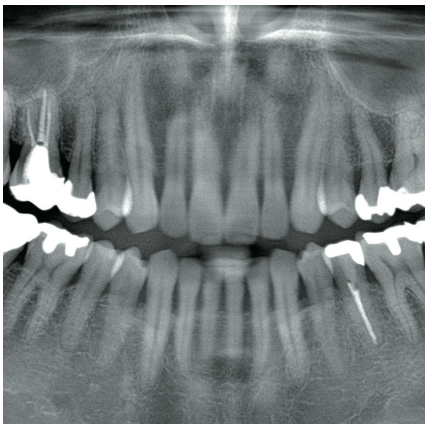
1. Images obtained depending on the image layer



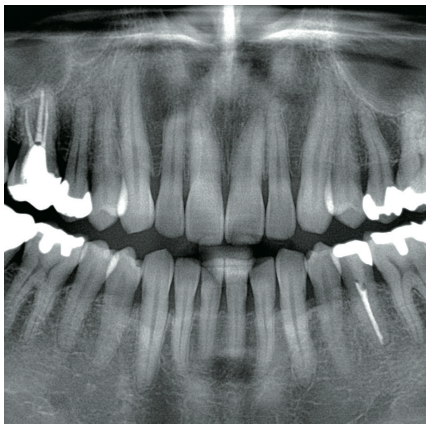
2. Select the area that is in focus and make the entire image in focus.



AFP (Adaptive Focal Point)
This function enhances the focus and clarity for the entire scan obtained by the image-layer exposure. Everything in the image from the root apex to the incisor region is in focus.



AIE-HD (AFP OFF)

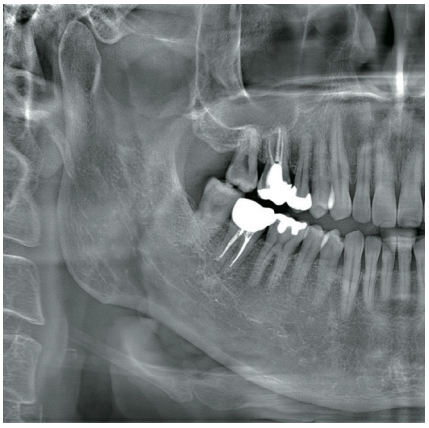


AIE-HD (AFP ON)

AGS (Adaptive Gray Scale)
AGS automatically adjusts density to make the whole panoramic image clearly observable including the dental arch, jaw bone, TMJ etc.

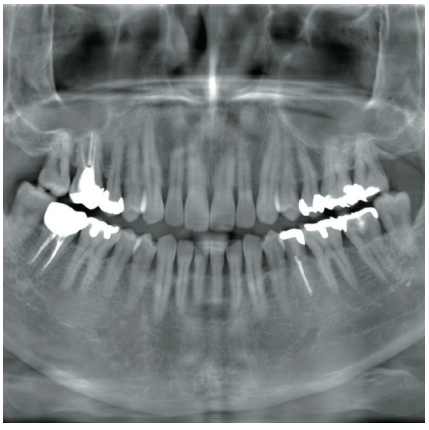


AFP + AIE-HD (AGS OFF)

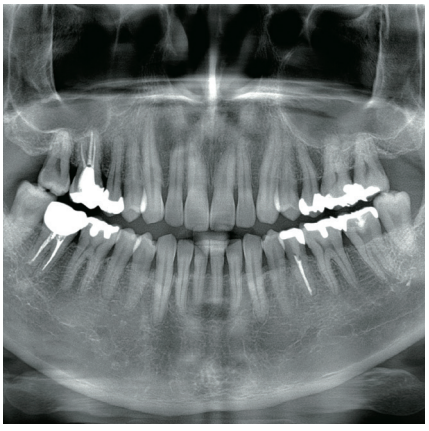


AFP + AIE-HD (AGS ON)

AIE-HD (Auto Image Enhancement)
This function optimizes panoramic image processing and makes every detail sharp and clear.

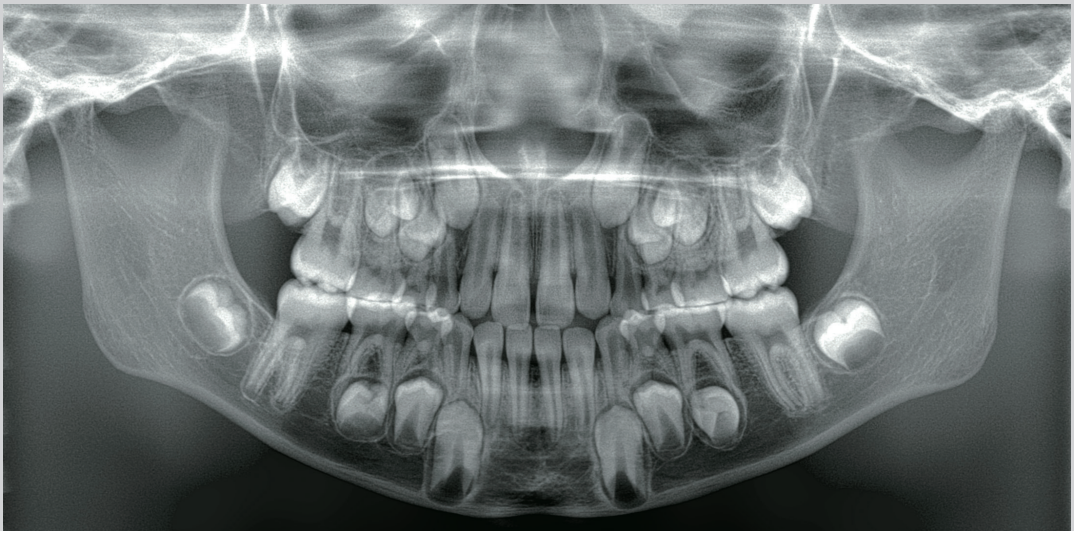


AFP + AGS (AIE-HD OFF)

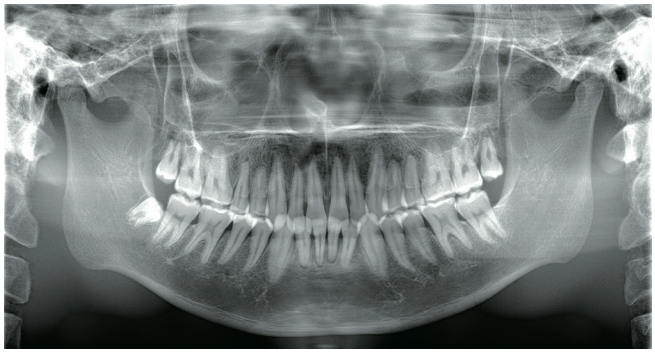


AFP + AGS (AIE-HD ON)

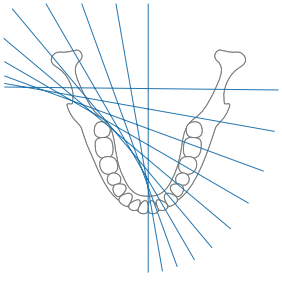
Panoramic

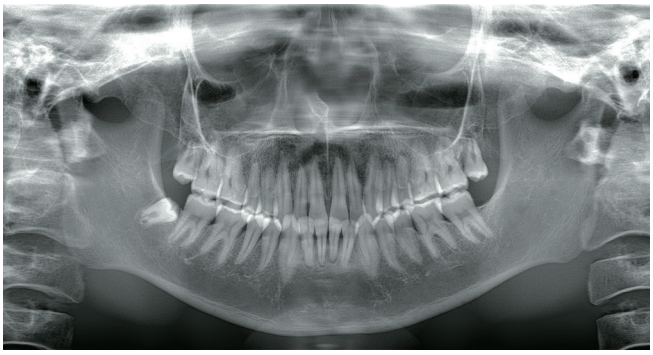


Pediatric Panoramic
For children's smaller jaws, the range of exposure is more narrow to reduce X-ray dose.

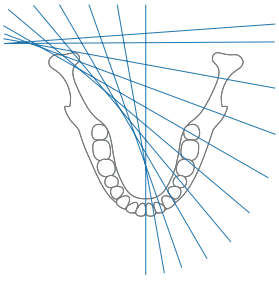


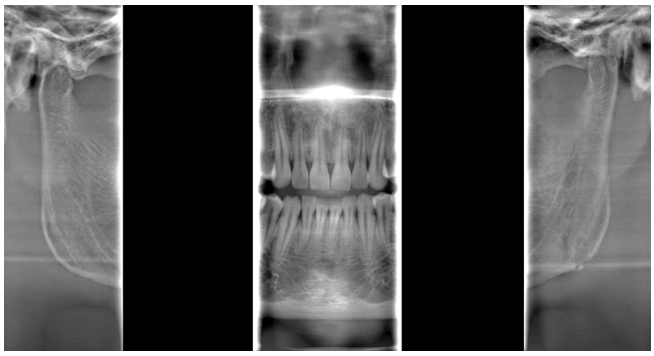
Orthographic Panoramic
The X-ray beam intersects the dental arch perpendicularly to reduce overlapping of neighboring teeth.



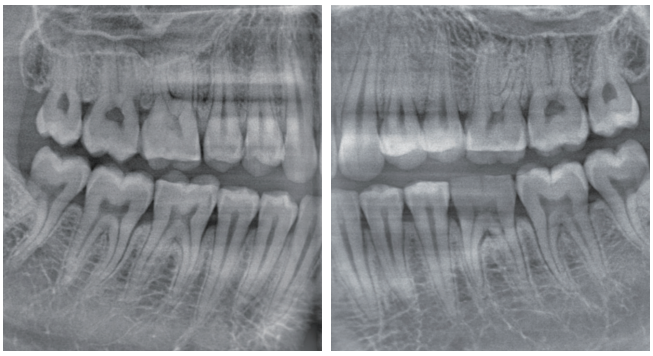


Shadowless Panoramic
This function reduces the shadow caused by the mandibular ramus on the opposite side.

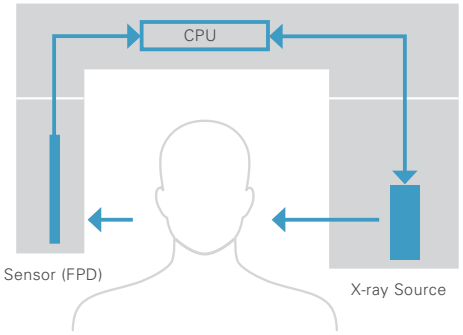




Partial Panoramic
If a complete panoramic image is not needed, a panoramic of only a specified region can be taken. By excluding parts of the dental arch, X-ray dose is reduced.



Bite-wing Exposure
This exposure is useful for prosthetics and diagnosis of mild periodontitis or caries in the proximal spaces of premolars and molars.



DDAE (Digital Direct Auto Exposure)
During the exposure the flat panel detector detects X-ray transparency in real time and then controls the amount of X-rays emitted to create images with a much better dynamic range.

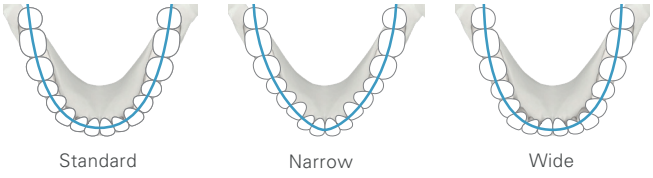
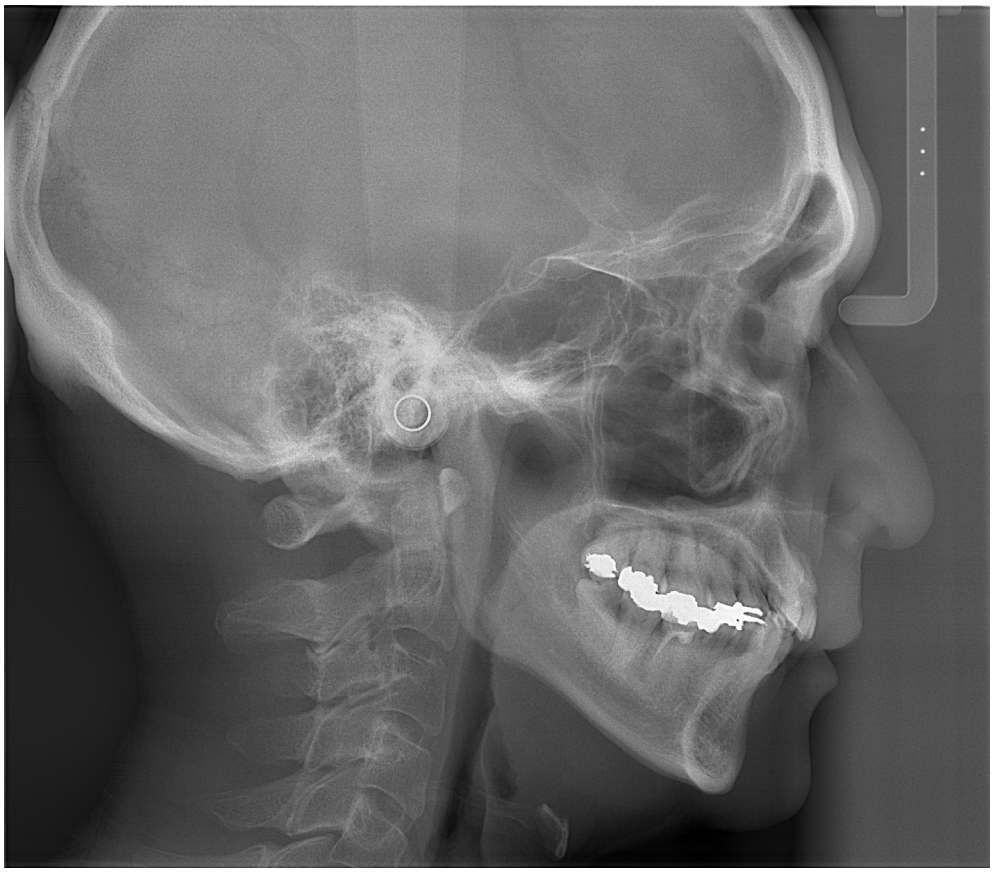


Image layer orbit matches dental arch
Three types of image-layer orbits are available to suit the individual patient's dentition.

Cephalometric



High Quality Cephalometric
100 KV tube voltage produces high quality cephalometric images, while high resolution of 96 µm makes it easy to find trace points. Additionally, the soft tissue filter can be adjusted in increments of 5mm to match the size of the patient.







Partial Cephalometric
Three regions can be excluded if not needed for evaluation.
This reduces the patient's X-ray dose.

Face-to-Face Design



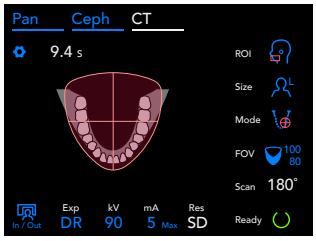
Face-to-Face Positioning
Laser beam positioning is more accurate if you have good communication with the patient.

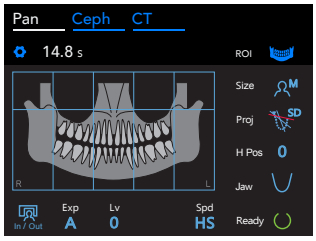
Wheelchair Compatible
The chin rest can be lowered to 865 mm (Short Column) to accommodate patients in wheelchairs.

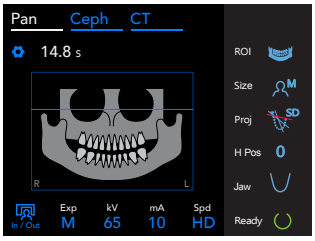
Control Panel
The control panel moves freely so that it can be used from the front, or side, for improved access during patient positioning.

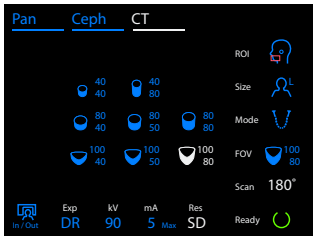


User Interface
The intuitive touch panel is designed for easy operation.





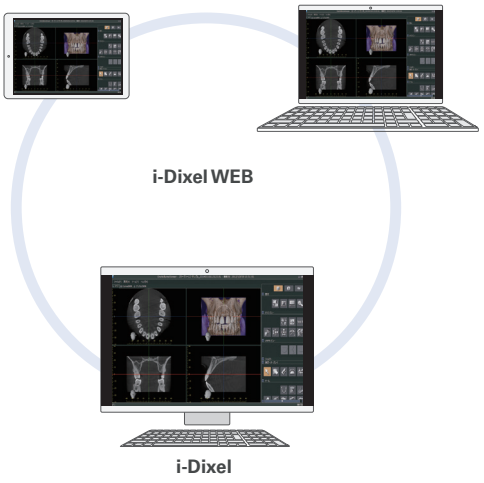




Network System in Clinic

i-Dixel WEB
CBCT and 2D images can be displayed on any PC or tablet computer using a conventional web browser without installing any special software, which is convenient and helpful for patient consultation.

i-Dixel conforms to the following DICOM3.0
1. Modality worklist management service class
2. Storage service class
3. Modality performed procedure step service class
4. Print management service class





Panoramic / Cephalometric Small Base



Panoramic Large Base



Cephalometric Large Base

Industrial Design: f/p design gmbh

Specifications

Name:	Veraview X800
Model:	X800
Order Selection:	F40 / R100 / F150
Rating:	AC 120V 60Hz AC 220 / 230 / 240V 50 / 60Hz
Power Consumption:	2.0 kVA
Weight:	Approx. 185 kg (approx. 220 kg with cephalometric)
Manufacturer:	J. MORITA MFG. CORP.

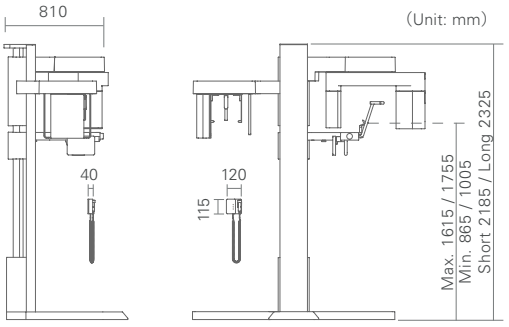
X-ray Tube Voltage:	60 – 100 kV (depending on exposure mode)
X-ray Tube Currnet:	2 – 10 mA (depending on exposure mode)
Nominal Focal Spot:	0.5

Panoramic Exposures:	High speed mode (standard panoramic) approx. 7.4 sec. Fine Mode (standard panoramic) approx. 14.8 sec.
Panoramic Regions: (consistent magnification)	Standard Panoramic (Standard, Orthographic, Jaw), Pedodontic Panoramic (Standard, Orthographic, Jaw), Maxillary Sinus Panoramic (Anterior, Posterior), Quadruple TMJ, Partial Panoramic, Bite-wing Exposure Distances measured on a panoramic image are not equal to the actual distances.

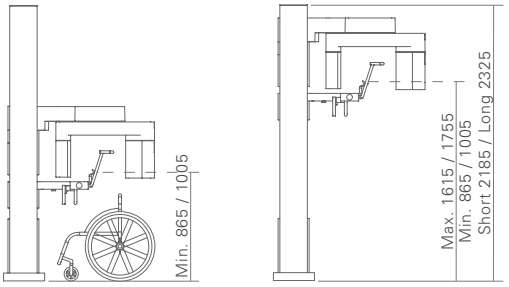
CBCT Exposure Time:	Approx. 9.4 sec. (180°) / approx. 17.9 sec. (360°)
CBCT Exposure Regions:	F40P / F40CP / F40C - Ø40 x H40, Ø40 x H80 R100P / R100CP / R100C - Ø40 x H40, Ø40 x H80 - Ø80 x H40, Ø80 x H50, Ø80 x H80 - R100 x H40, R100 x H50, R100 x H80 F150P / F150CP / F150C - Ø40 x H40, Ø40 x H80 - Ø80 x H40, Ø80 x H50, Ø80 x H80 - R100 x H40, R100 x H50, R100 x H80 - Ø150 x H50, Ø150 x H75, Ø150 x H140

Cephalometric Exposures:	F40CP / F100CP
Direction and Size:	LA 220 x 250, PA 220 x 200 mm

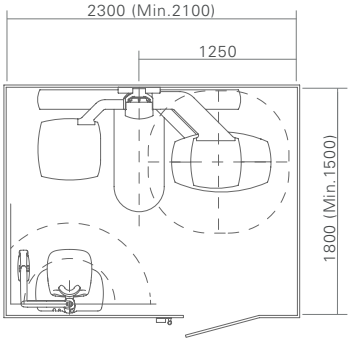
Wear protective aprons and coverings as necessary during X-ray exposure.
The unit must be fixed to the floor and wall when installed.
If minimal layout dimensions are used, there may be very little space to move around inside the booth.

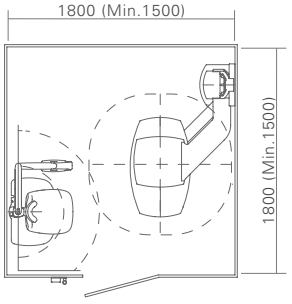


X800 - F40CP / R100CP
(Pan / Ceph / CBCT Exposure)



X800 - F40P / R100P
(Pan / CBCT Exposure)





Diagnostic and Imaging Equipment

Treatment Units

Handpieces and Instruments

Endodontic System

Laser Equipment

Laboratory Devices

Educational and Training Systems

Auxiliaries



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Subject to technical changes and errors.

17.03 Veraview X800 Br En