PreXion
make **IT** visible

EXPLORER
PreXion3D

Make IT Visible –

Advanced Diagnostic Technologies
Moving You Forward

EXPLORER PreXion3D

# Make IT Visible –
Overcoming Challenges at Every Step

Few companies on the market are as specialized in three-dimensional X-ray diagnostics as PreXion. With more than 15 years of experience in software-supported 3D X-ray imaging, PreXion systems offer outstanding precision for safe diagnostics and planning in all areas of dentistry. After an extremely successful entry into the US market, PreXion is proud to announce its new CBCT system: the PreXion3D EXPLORER.

The PreXion3D EXPLORER is suited for a multitude of specialties:

• Implants • Oral Surgery • Periodontics • Endodontics • TMJ • ENT • Airway Analysis • And More

Let PreXion empower you and your practice with in-person training, service and maintenance, while you achieve peace of mind with a full-service extended warranty which covers the entire device, lens included.
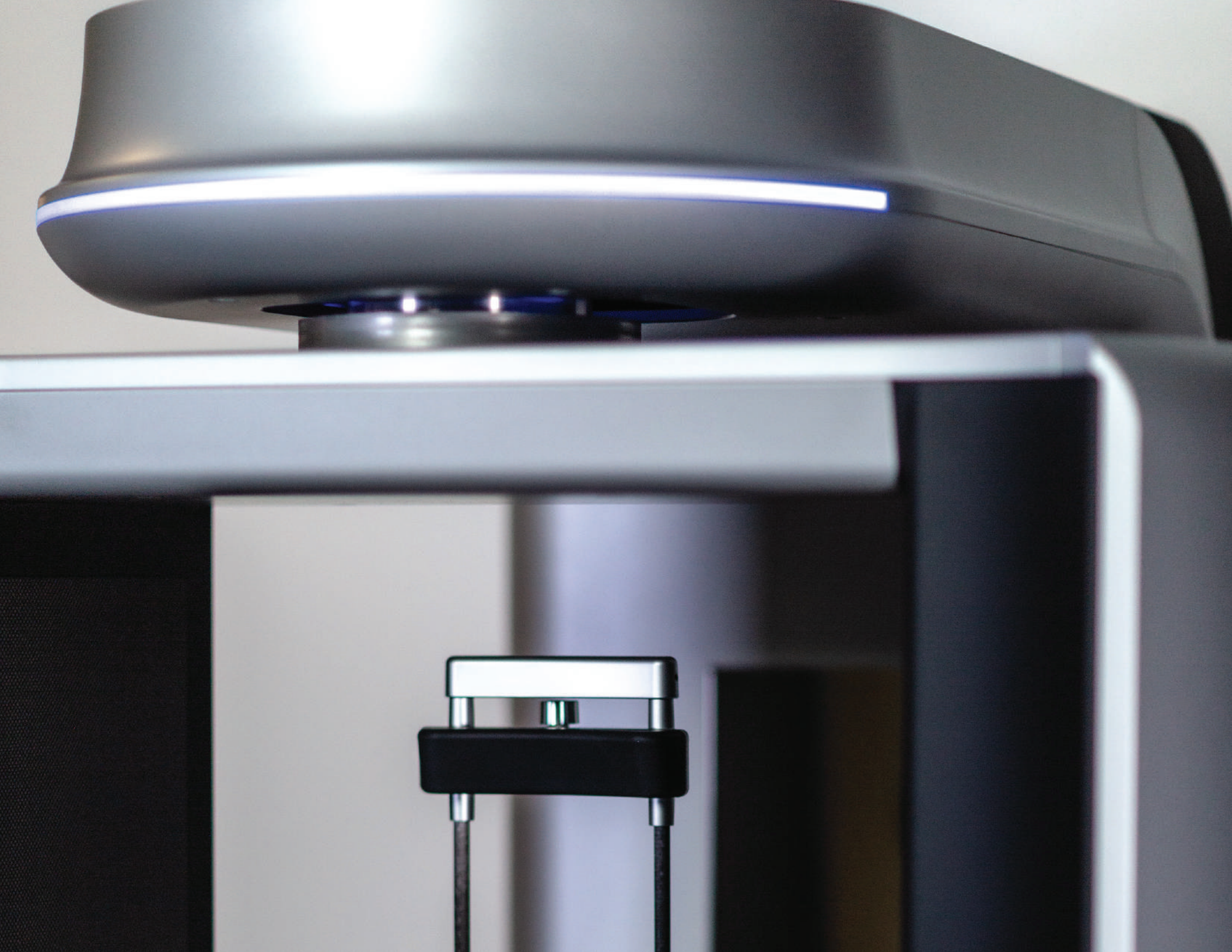
Why CBCT?

Why 3D instead of 2D?

Three-dimensional CBCT imaging is decisively superior to conventional two-dimensional X-ray equipment, as the dental professional can spatially examine the oral conditions according to the most varied medical aspects. 3D imaging can also reduce the length of time that patients are exposed to radiation. In addition, the volume structure of the hard and soft tissues are incomparably better represented in 3D CBCT imaging than in 2D X-rays.

Why a large FOV?

With one of the largest fields of view (FOV) on the market (15 x 16cm), the PreXion3D EXPLORER can display all the important anatomical structures of the skull in great detail. The powerful imaging software helps to highlight and measure relevant areas. Large-area spatial image analysis helps to develop the best therapy options, particularly in oral and maxillofacial surgery, as well as ear, nose and throat medicine.
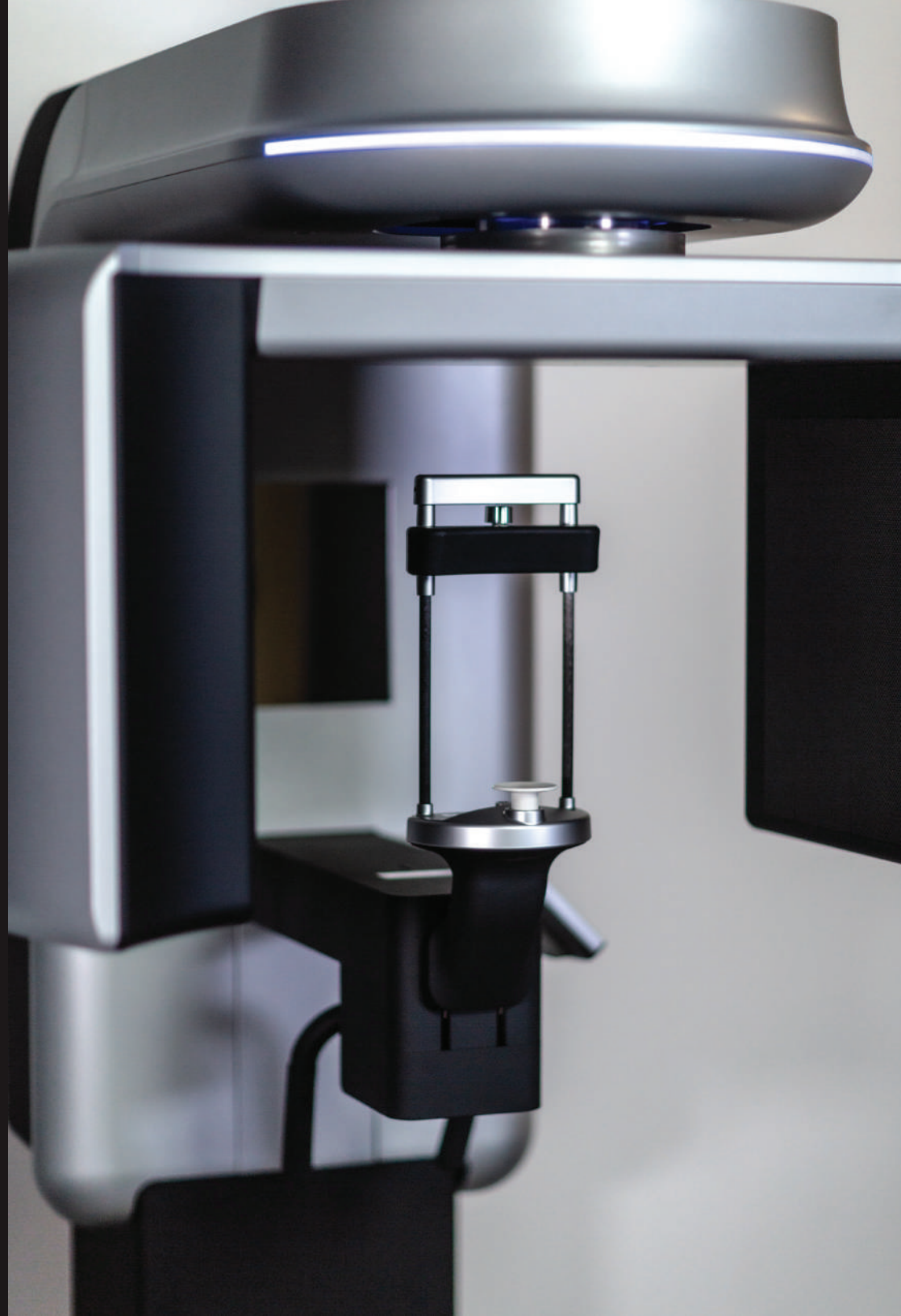
Why PreXion3D EXPLORER?

The powerful system components of the PreXion3D EXPLORER enable an extraordinary combination of the most precise 3D imaging, large image detail, lowest radiation exposure, reliable diagnostics and digital planning for all indications in modern dentistry, including periodontology, endodontics, implantology, orthodontics and maxillofacial surgery, among many others. Its patient management system is designed for secure and networked communication of patient data across multiple rooms within a practice and can be integrated into the existing infrastructure with ease.

With the precision and professional competence of PreXion, dental professionals have a powerful partner at their side.

High Resolution; Low Radiation

With many 3D imaging systems on the market today, high-quality images are often accompanied by high radiation exposure. The PreXion 3D Explorer offers balance of both aspects. Its 0.3mm focal spot and 0.07mm voxel size, combined with technological improvements, including a new flat panel detector (FPD), offers the highest quality diagnostic images for clinicians with low radiation exposure for patients. The new FPD delivers extreme clarity by utilizing 2,048 x 2,560 pixels, with an active area of 31.7 x 25.4cm, capable of capturing the entire cephalometric field.

Radiation Low Exposure Example:

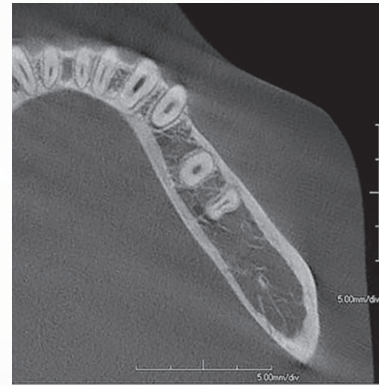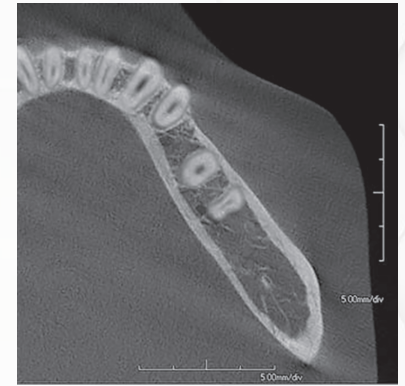| FOV	Patient Size	Voxel Size	µSv (Exposure)
5x5cm	Med Adult	0.07mm	22
5x5cm	Child	0.07mm	11
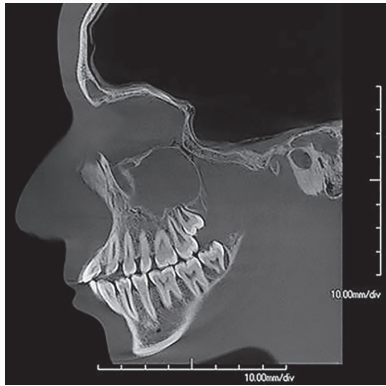
Voxel Size 0.1mm

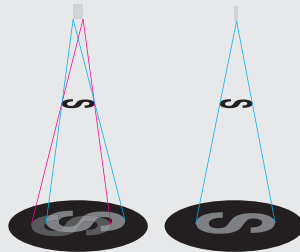Voxel Size 0.07mm

Focal Spot 0.5mm

Focal Spot 0.3mm

The Explorer utilizes the smallest focal spot in the industry at 0.3mm for all FOVs, and voxel sizes ranging from 0.07 to 0.3mm in order to maintain image quality. The output in ultra-HD with a small voxel size enables a more detailed representation of even the finest structures.

What is a focal spot?

The focal spot, also called focus, is the area on the target of the X-ray tube which is struck by the electron stream and emits X-rays. The larger the focal spot's area, the poorer the detail of the image. The PreXion3D EXPLORER has a 0.3mm focal spot – the smallest in the industry.

What is a voxel?

A combination of the words "volumetric" and "pixel," a voxel is a three-dimensional volume element shaped like an isometric cube. The PreXion3D EXPLORER offers powerful imaging software with a voxel size of only 0.07mm that ensures a detailed rendering.

© Yuri Hoyda D Stock.adobe.com

Field of View

The PreXion3D EXPLORER provides an accurate 360˚ panoramic perspective from 523 to 1,024 projected views. In addition to the 3D analysis function for image detail sizes of 5x5cm, 10x10cm, 15x8cm, and 15x16cm, the device features "True" and "Reconstructed" panorama modes. It impresses with its ease of operation, comprehensive planning programs and imaging software across all dental indication areas.

5x5cm 10x10cm
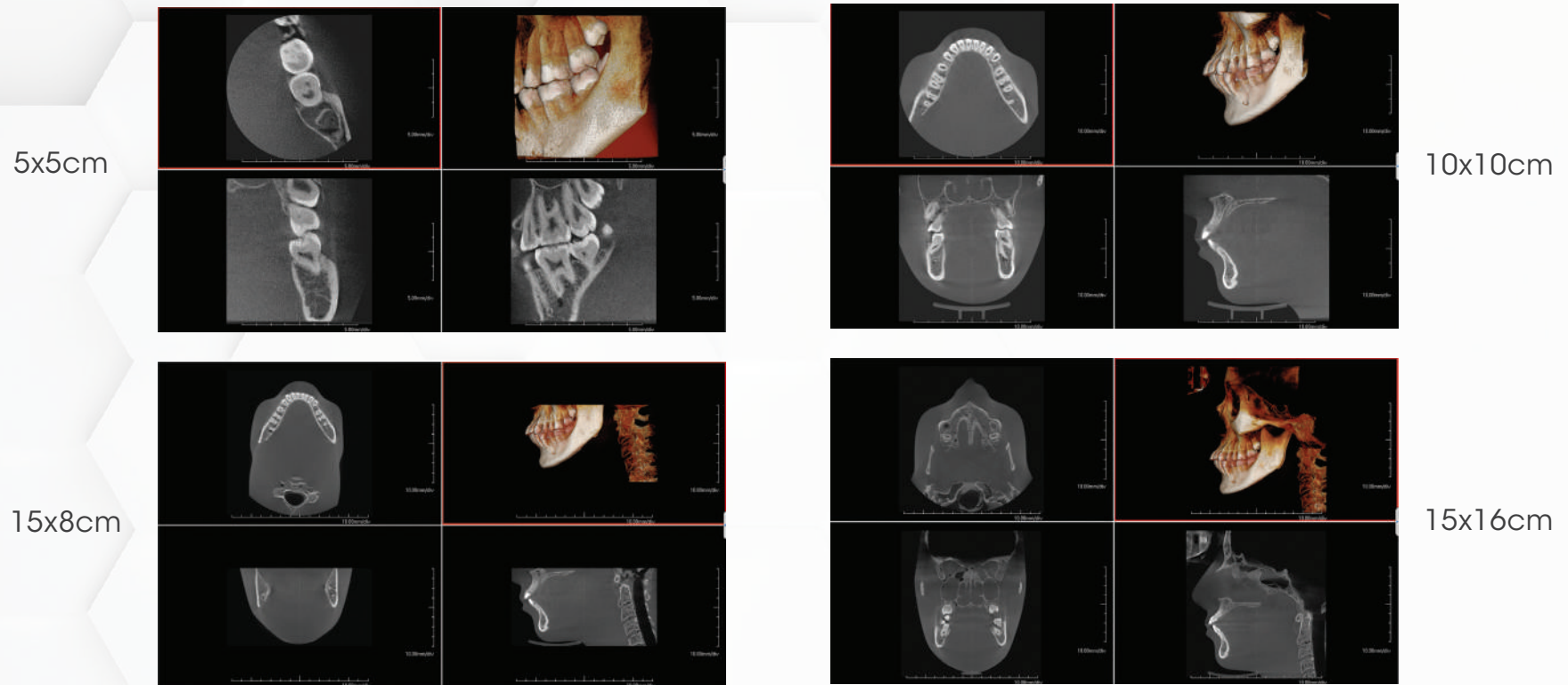
15x8cm 15x16cm

Voxel size range to each FOV:

5x5cm: 0.07–0.1mm	10x10cm: 0.1–0.2mm	15x8cm: 0.2–0.3mm	15x16cm: 0.2–0.3mm

An X-ray cone beam irradiates around the object. The acquired data is used to generate and display a 3D image. The size of the cone beam can be selected based on the scanned area (Face/Full/Teeth), as well as the size of the patient.
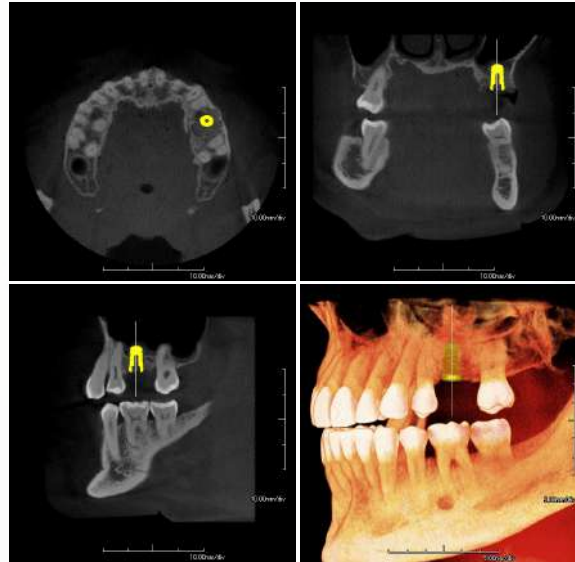
Field of Application

The precise and high-resolution display of hard and soft tissue enables outstanding diagnostics and planning across all areas of modern dentistry and maxillofacial surgery.
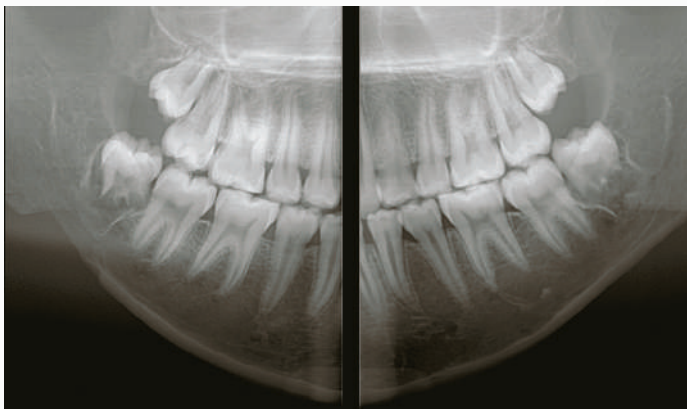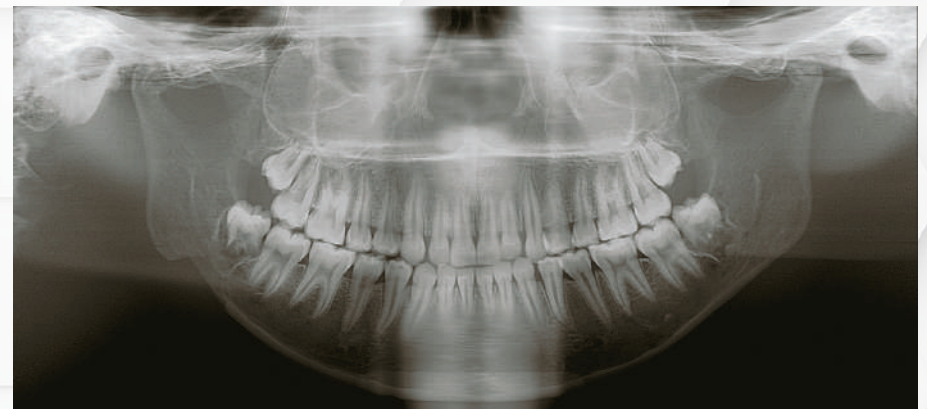
Endodontics

Implantology

Orthodontics

Bitewing

Panoramic

Make IT Visible – The Power of PreXion's Concierge Service

Improving image quality with exclusive innovative technologies.

PreXion is committed to excellence in service and support. A true industry leader understands that reputations are earned one customer at a time. PreXion has repeatedly provided a uniquely exceptional experience in the market for over 15 years with an uncompromising dedication to product reliability, service and support. From cutting-edge technology, industry-leading response times and an expansive KOL support network, PreXion takes pride in delivering complete customer satisfaction.

PreXion Concierge Service

1. Both online and in-office service and maintenance performed by our certified technicians.

2. Technology upgrade opportunities to meet expanding clinical offerings and demands.

3. Scholarship toward continuing education courses and seminars with PreXion Imaging Advisory Board doctors.

4. Additional in-office training and product consultations conducted by our professional and knowledgeable sales and training representatives.

5. Extended warranty featuring comprehensive coverage of the machine, including the lens.

Christine Skordeles, DDS, New York, NY

"The PreXion CBCT I purchased was the best decision I've made. From the start, the entire PreXion team from front office to delivery and installation offered a seamless experience. Tony, the clinical applications trainer, was great teaching me how to use the scanner. Tech support is able to remote-in and assist in troubleshooting along with performing remote software updates. As a General Dentist, the PreXion CBCT increases diagnostic capabilities in definitive diagnoses of root canals, where it is a game changer …The clarity, ease of use, and resolution of the scans make the PreXion CBCT an essential tool in state-of-the-art dentistry and patient care. With the PreXion CBCT we can now see what the patient's chief complaint is on the screen."
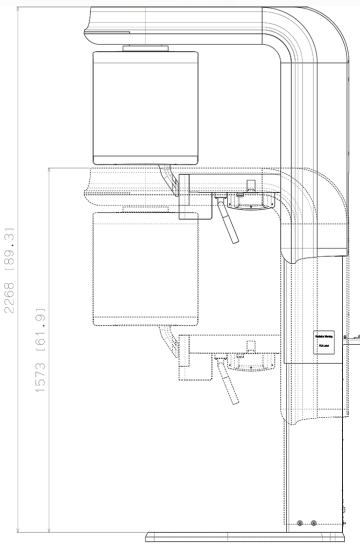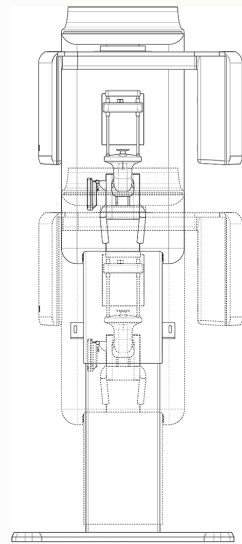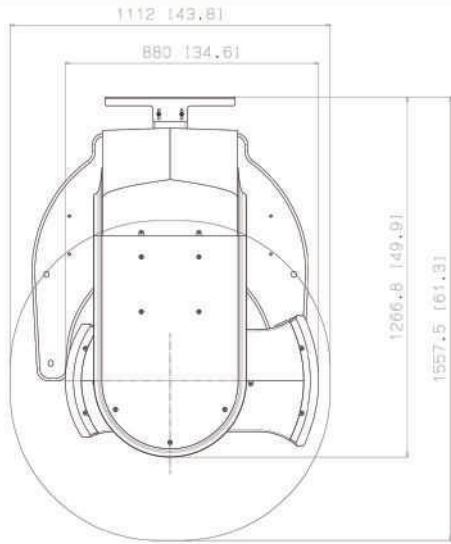
Unit of length: mm (inches)

Floor fixation and wall fixation are necessary for this device.

Device Type	Cone Beam Computed Tomography System, Head/Neck		Required Specifications	
Focal Spot	0.3mm x 0.3mm		For Console	Intel Xeon Processor (3.2 GHz or Faster 8 Core Turbo HT)
Tube Voltage	90–110kV			Video Card with At Least 5 GB of Onboard Video Memory
Tube Current	1–5mA			TrueColor 24bit RGB Display
Total Filtration	2.7mm Al			Monitor Resolution: 1,920 x 1,080 or higher
Voxel Size	0.07mm, 0.1mm, 0.2mm, 0.3mm			Main Memory of at least 32 GB
FOV	Teeth: 5 x 5cm			1 Gbit NIC Add-in Card x 2 (Jumbo Frame)
	Arch: 10 x 10cm			Microsoft Windows 10 (64bit) Pro Edition
	Full: 15 x 8cm			Hard Drive: 3 (256GB, 2TB x2)
	Face: 15 x 16cm			Monitor Size: 19inch or larger
				The PC Complies with IEC60950/CISPR22/EN55024
Scan Time	CT Scan Mode		For Network Client	Intel Pentium 4 Processor 1.5GHZ or Faster
	Standard Mode: 10 sec			Video Card with At Lease 128MB of Onboard Video Memory
	High-Definition Mode: 18 sec			16M Color (24bit RGB) Display
	Ultra High-Definition Mode: 20 sec			Monitor Resolution 1,920 x 1,080 or higher
	Panoramic Scan Mode			Main Memory of At Least 1GB
	Standard Mode: 14 sec			1,000Mbit (1 Gbit Ethernet)/100 Mbit LAN Card or A 10 Mbit LAN Card is Recommended
	Cephalometric Exposure Mode LA: 0.1 sec			Microsoft Windows 7 or 10
	PA: 0.1 sec			Microsoft Word 2010, 2013 Must Be Installed When Using the Report Function
	Carpus: 0.1 sec			Monitor Size: 19inch or Larger
Gray Scale	16 bit			The PC Complies with IEC60950
Patient Position	Standing/Wheelchair Accessible			
Scanner Weight	185kg (407 lbs)			
Rated Power	Frequency: 50/60 Hz Voltage: 100–240V AC Input: 1.0kVA			

PreXion 3D Elite   PreXion 3D Eclipse   PreXion 3D Excelsior   PreXion 3D Explorer

2007   **2013**   **2017**   **2020**

What we have done.

Imaging Technology Moving You Forward

PreXion Corporation is a Japanese company specializing in medical imaging research and development. Since our company was founded in 2007 as a spin-off from TeraRecon, Inc. we have been developing and distributing Dental Cone Beam CTs in the US and abroad. With our advanced accumulated imaging technologies, we succeeded in developing the world's first photoacoustic imaging system using NIR-LED as a light source. We are committed to continuously developing new technologies to contribute to human health throughout the world. We accomplish this through our company philosophy of "Make IT Visible" coupled with our entrepreneurial spirit.

Who we are.