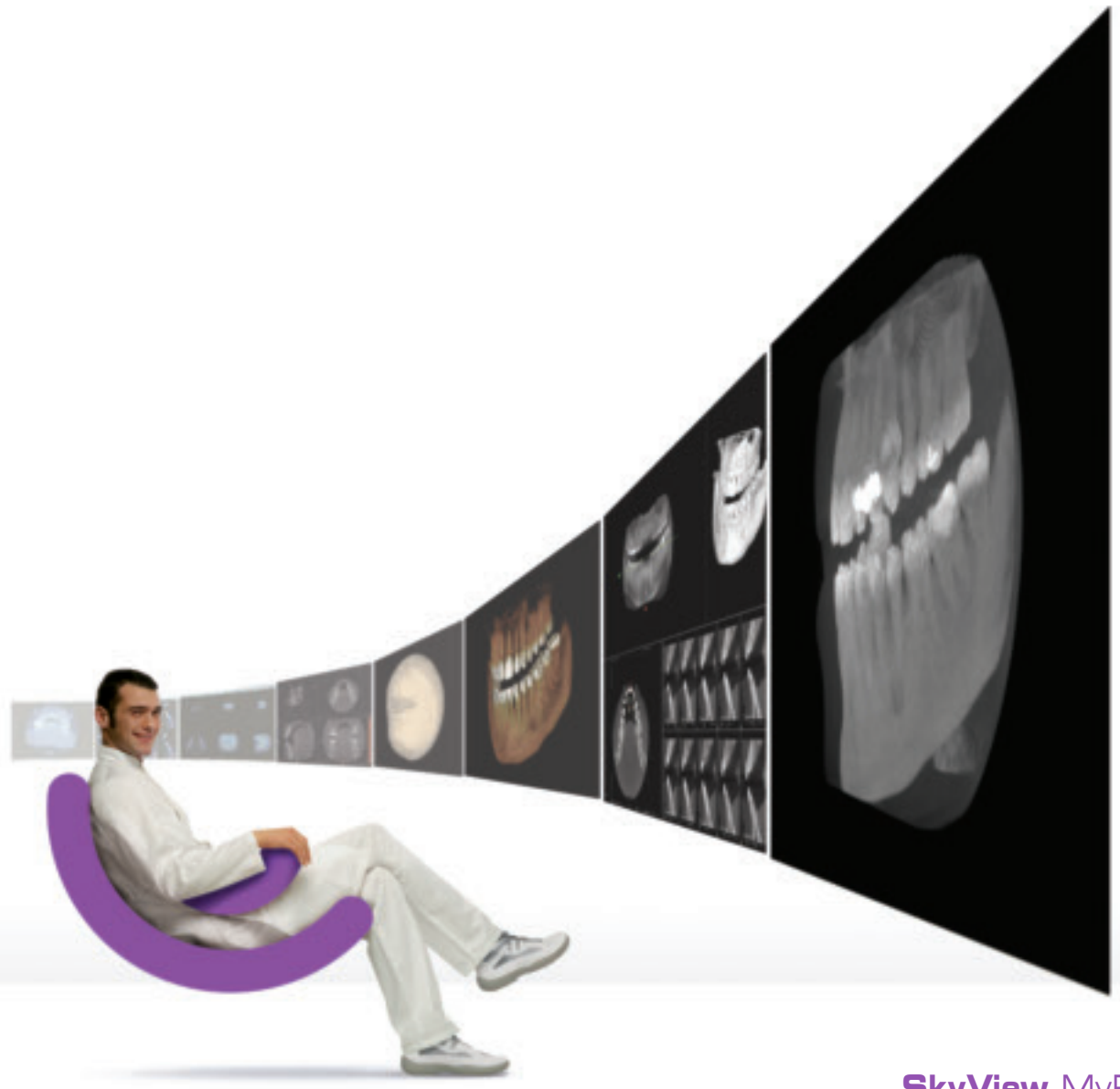
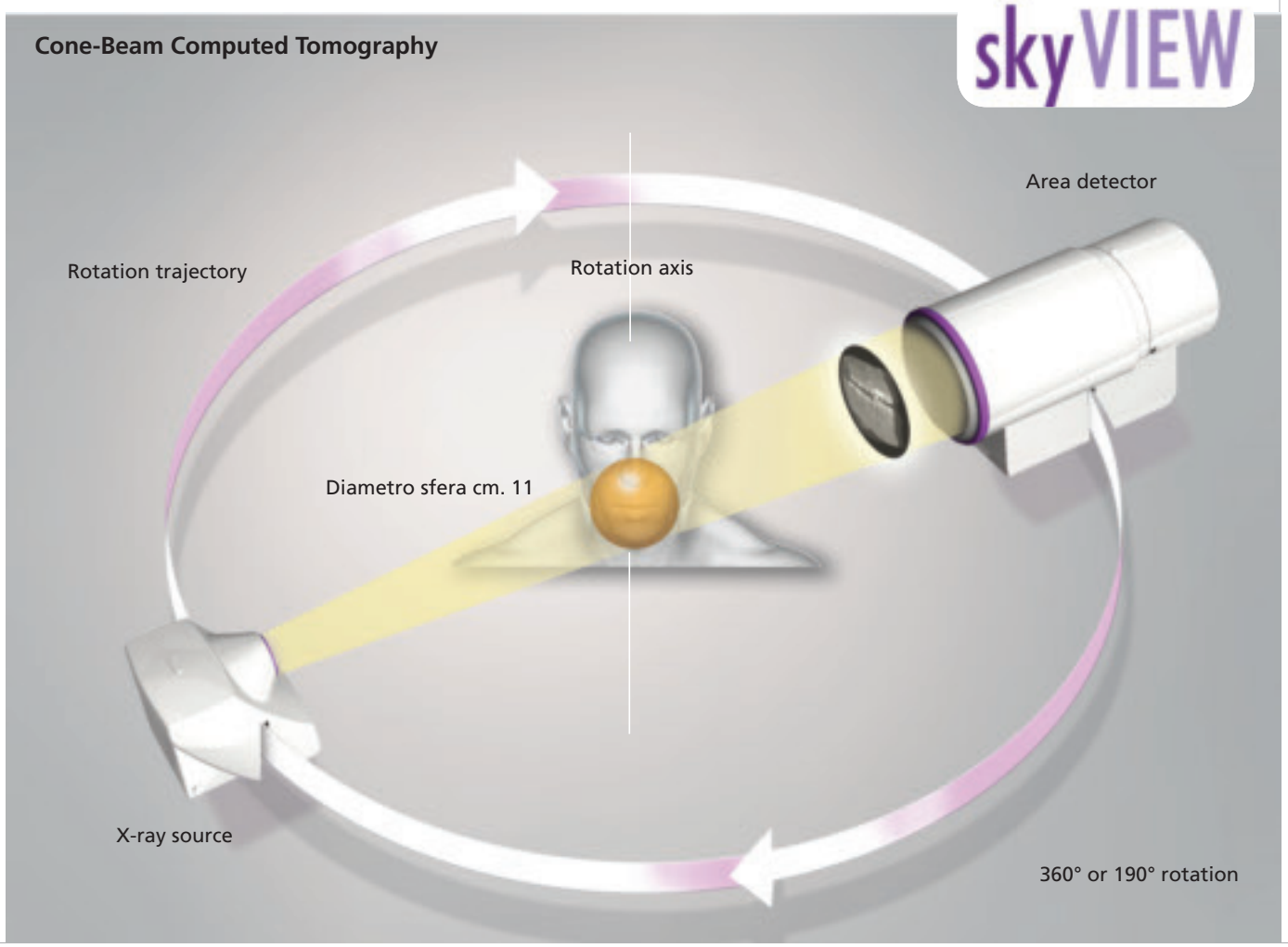


SkyView MyRay:
3D panoramic images, at your fingertips.

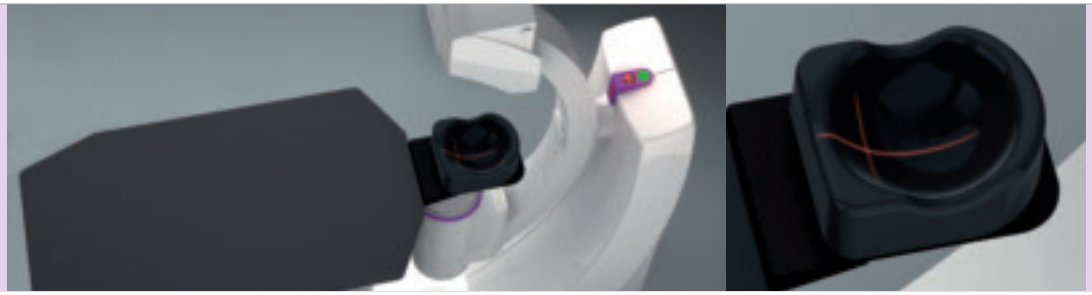
skyVIEW 3D panoramic imager with Cone-Beam Computed Tomography

myray dental imaging

so simple, so different



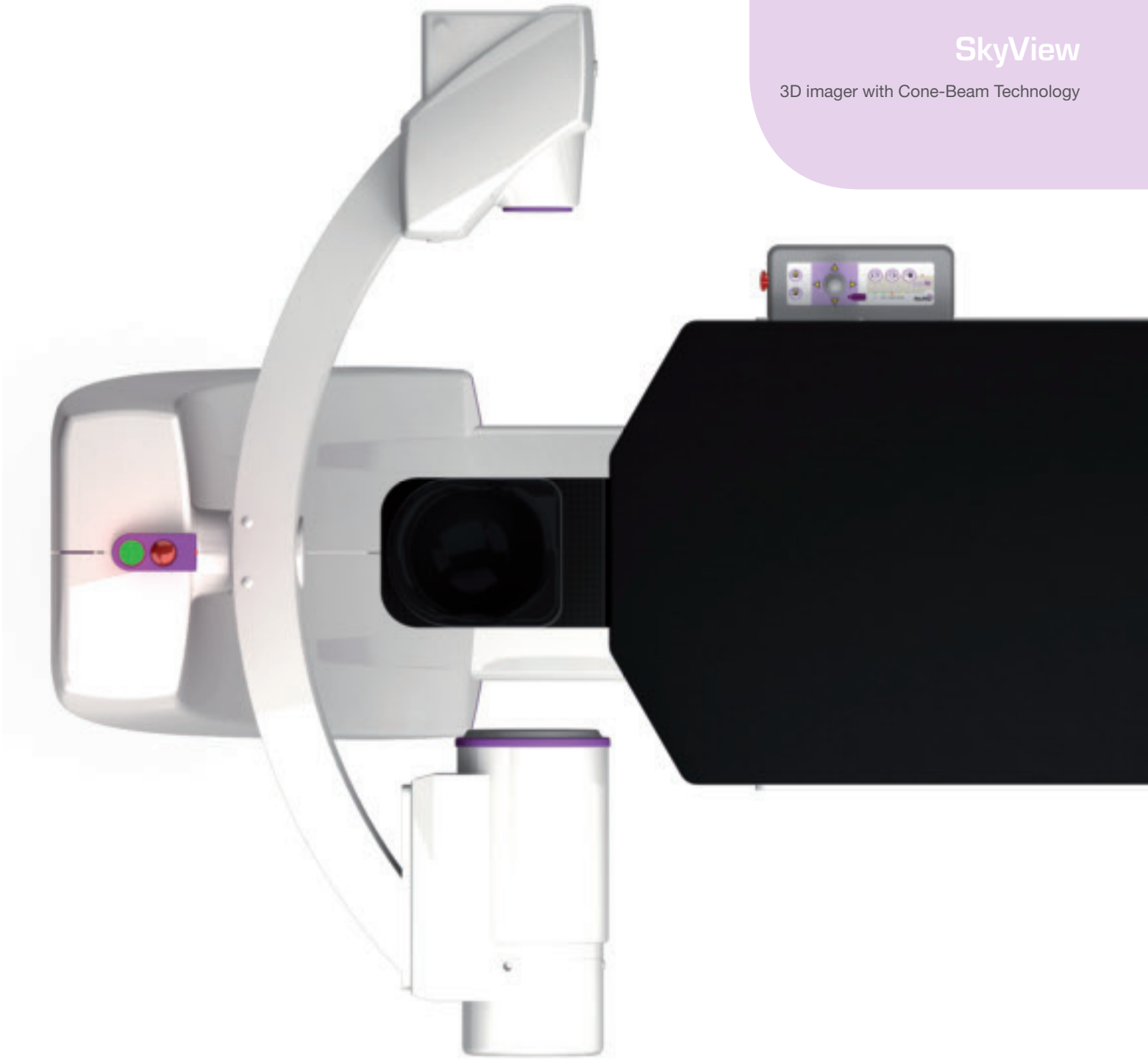
Pushing forward the frontiers of X-ray diagnostics



MyRay is your new partner in the dental profession, able to provide you with new comfort and the best available technologies for X-ray diagnostics: easy-to-use and intuitive ergonomic instruments, designed for those looking for innovation and speed, design and performance. Today MyRay introduces SkyView, a new way of looking at 3D imaging. A panoramic imager created to increase diagnostic capabilities towards the third dimension, so far beyond the reach of dental surgeries. Thanks to the new CBCT (Cone-Beam Computed Tomography) technique, SkyView provides you with 3D images whose quality and detail were simply inconceivable in the past. Solutions tailored to specific professional requirements, because SkyView is designed to respond to your needs by MyRay professionals.

SkyView

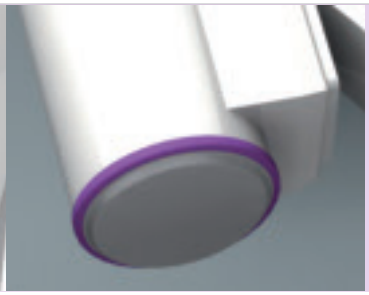
3D imager with Cone-Beam Technology



CBCT Cone-Beam Computed Tomography

SkyView adopts a new and increasingly successful X-ray technique, known under the acronym CBCT, ideal for obtaining three-dimensional reconstructions of teeth and the jaw. The figure above left shows the working principle of CBCT technology. The source-detector system is made up of a cone-beam X-ray source on one side and a state-of-the-art detector on the other. Together, these elements rotate around the patient's head. Compared to total body tomography techniques, the advantage of CBCT technique is that images are acquired with just one rotation of the source-detector system around the patient. Consequently, the time required to perform the examination is much shorter and above all there is a significant reduction of the X-ray exposure dose to the patient. SkyView is the most effective way to approach 3D radiography. No longer is 3D radiography restricted to radiology clinics, SkyView opens the door to dental surgeries. The assisted software procedure allows dentists to acquire top quality images through quick and easy steps, and to elaborate optimal panoramic projections.

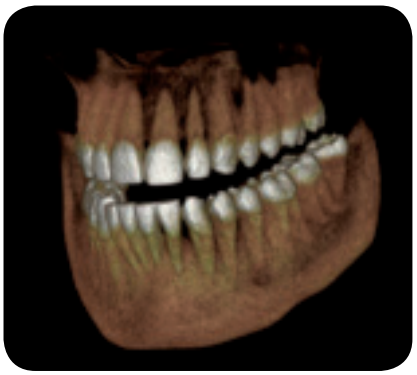
Created for those who value a patient's wellbeing



SkyView is a tomographic system based on a state-of-the-art detector: a dual field image intensifier offering maximum contrast and maximum definition, with no distortion. The pulsed X-ray emission system emits very low X-ray doses, comparable to those generated by panoramic dental systems customarily used in dental surgeries. This way you can increase your diagnostic potential without increasing the risks to your patients. Moreover, patient experience with SkyView will be relaxing throughout the entire X-ray examination. SkyView utilizes a motorized patient table which enables the patient to lie comfortably while images are acquired. As a matter of fact, it has been demonstrated that in a relaxed position without the presence of constricting elements, patients find it easier to stay immobile, thus improving exam quality. During the examination, the detector rotates around patient table, and the patient does not experience the unpleasant feeling of being enclosed inside a machine. The total lack of cephalostats, straps or bites makes patient positioning simple and very fast. The control panel located on the patient table includes a parametric joystick for servo-assisted table movement. Precise table positioning is achieved with the help of LASER tracks along all three axes. SkyView possesses intuitive instruments which guide the dentist throughout the complete acquisition process.

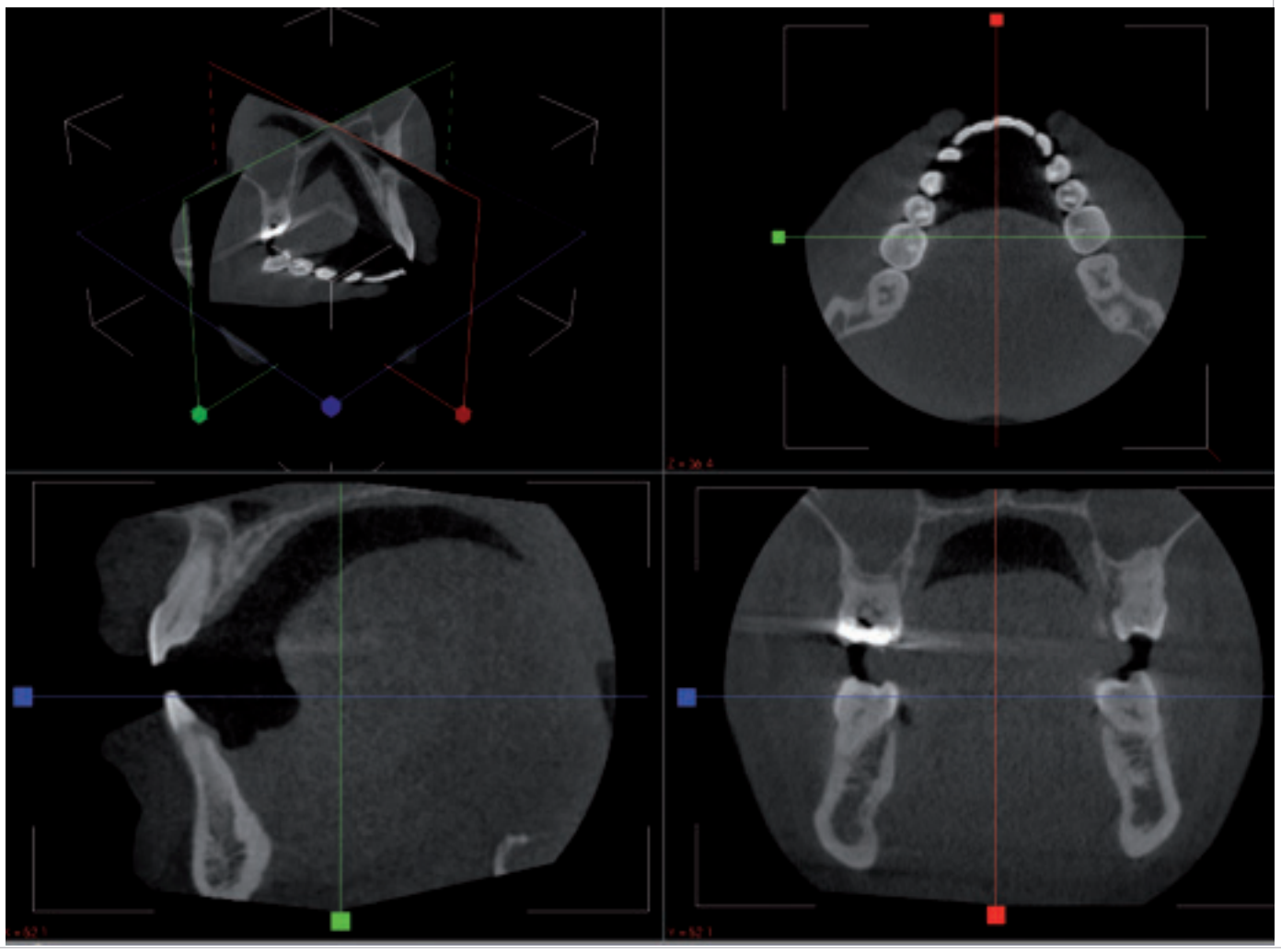
SkyView

3D imager with Cone-Beam Technology

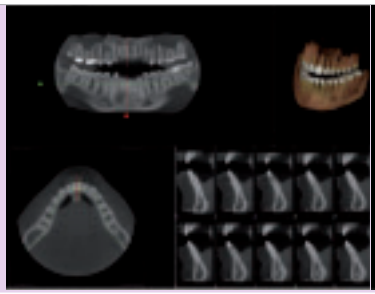


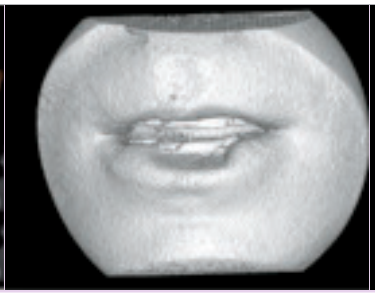
High definition volumetric radiology

SkyView system uses a single rotation scanning technique to reconstruct an 11 x 11 x 11 cm^3 volume. The time for performing an examination is very short (11 to 30 seconds) and can vary according to the chosen protocol. As a matter of fact, SkyView allows you to select X-ray dose according to patient type and to the desired reconstructed image quality. The effective exposure time lasts just a few seconds. Reducing the field of view to 7 x 7 x 7 cm^3, it is possible to acquire data with a high resolution zoom. SkyView can visualize both soft and hard tissue without need of further scanning. Designed to be compatible with the best surgical planning instruments on the market, SkyView allows you to perform dedicated examinations on implant surgical templates and later to export images in DICOM 3.0 medical standard.



One instrument, a multitude of solutions

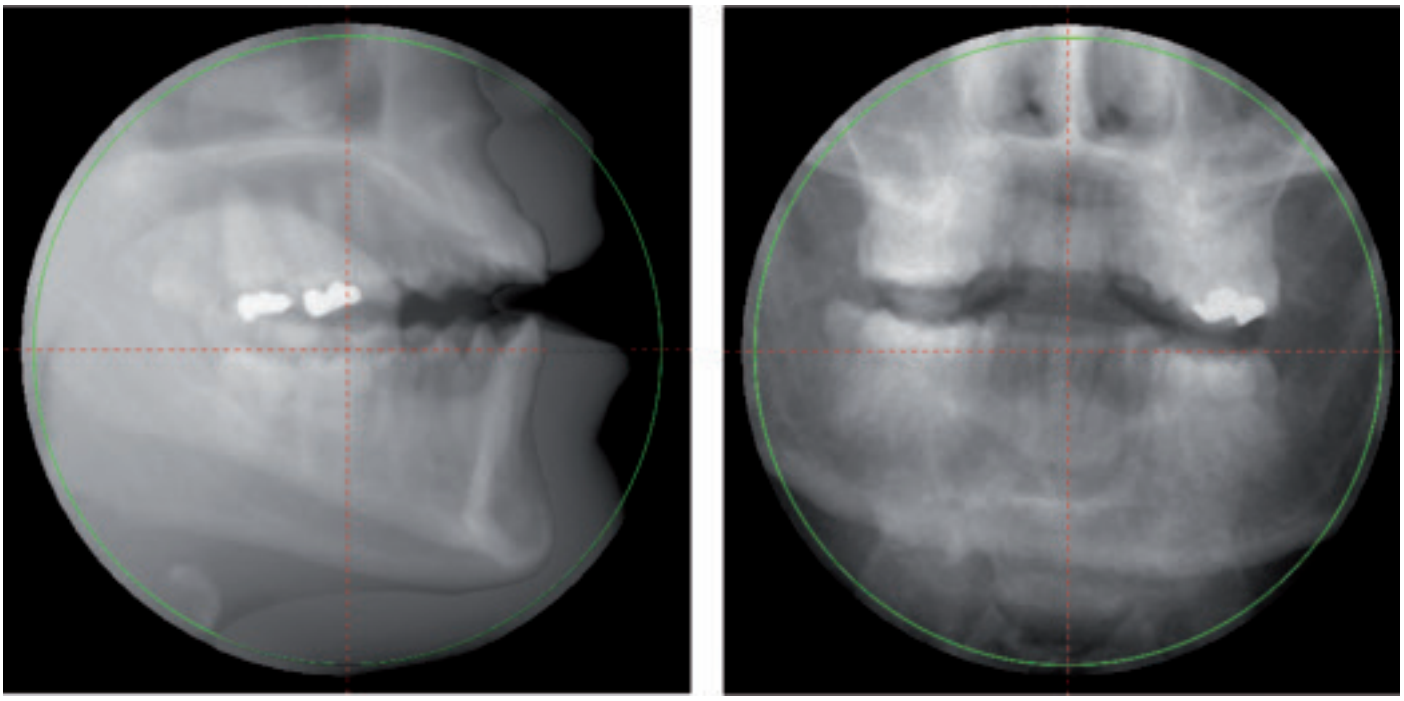




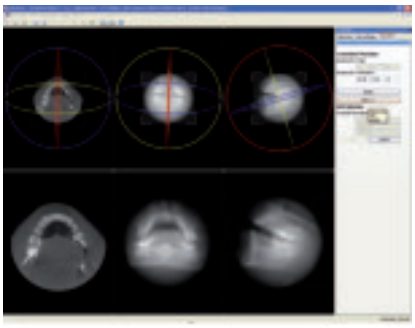
SkyView incorporates an intuitive software which enables simple navigation of 3D data while referring to a panoramic image, well-known in dentistry.

The acquired volumetric data can be elaborated with basic instruments, such as the creation of panoramic images and transverse sections, the measuring of lengths and angles. Moreover, advanced instruments are included, capable of refining volumetric data in order to extract the best diagnostic information.

The panoramic images reconstructed with volumetric technique overcome the typical disadvantage of panoramic dental systems, which introduce a difference of magnification in the radiographic image. Tomographic volumetric data can be elaborated to provide three-dimensional images of different types.



Previews allow you to check correct patient positioning (Scout view)

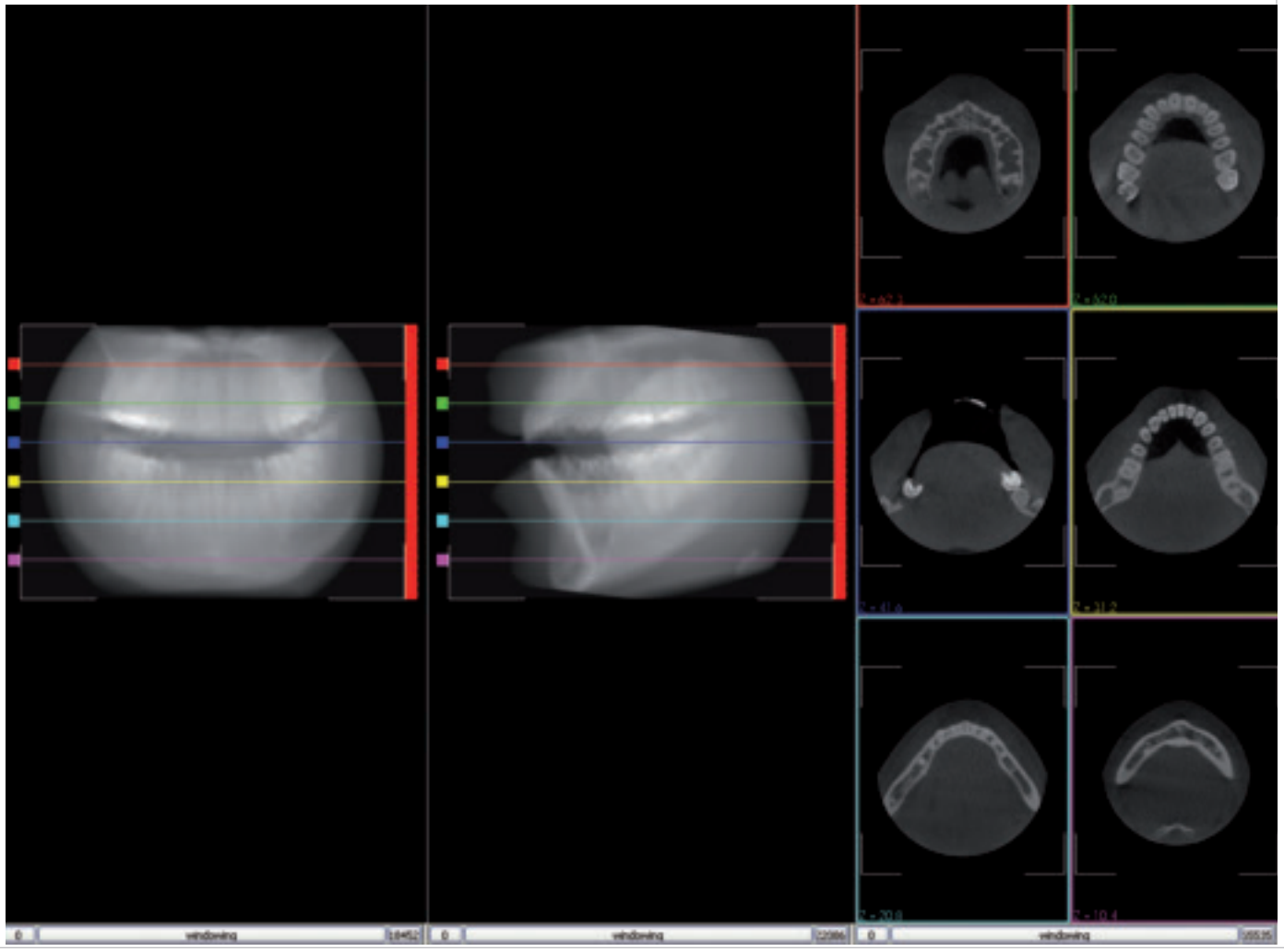


Easy planning

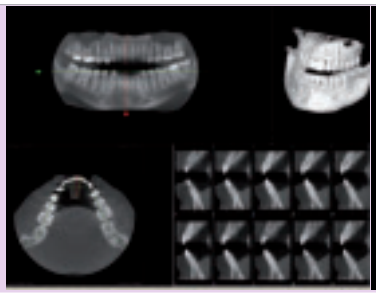
The guided acquisition procedure reduces the possibility of mistakes thanks to help messages which follow the user step-by-step. The variety of images that can be obtained from volumetric tomographic data acquisition is of great help in terms of dental diagnostics. Some important applications for dental tomography include:

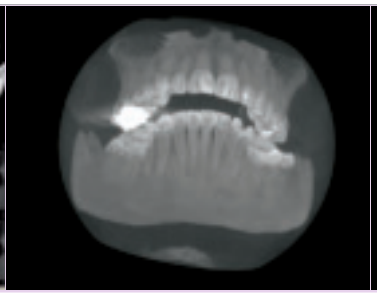
- prosthetic intervention planning, especially implant placement
- cystic pathology diagnosis
- identification of included teeth and of their precise position.

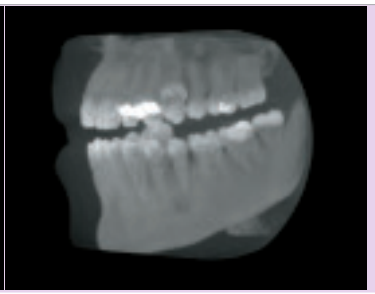
All these clinical situations can be precisely evaluated before surgical intervention, with doubtless advantages for planning and execution itself. For instance, SkyView software allows you to locate and highlight the precise course of the mandibular canal.



Different by choice





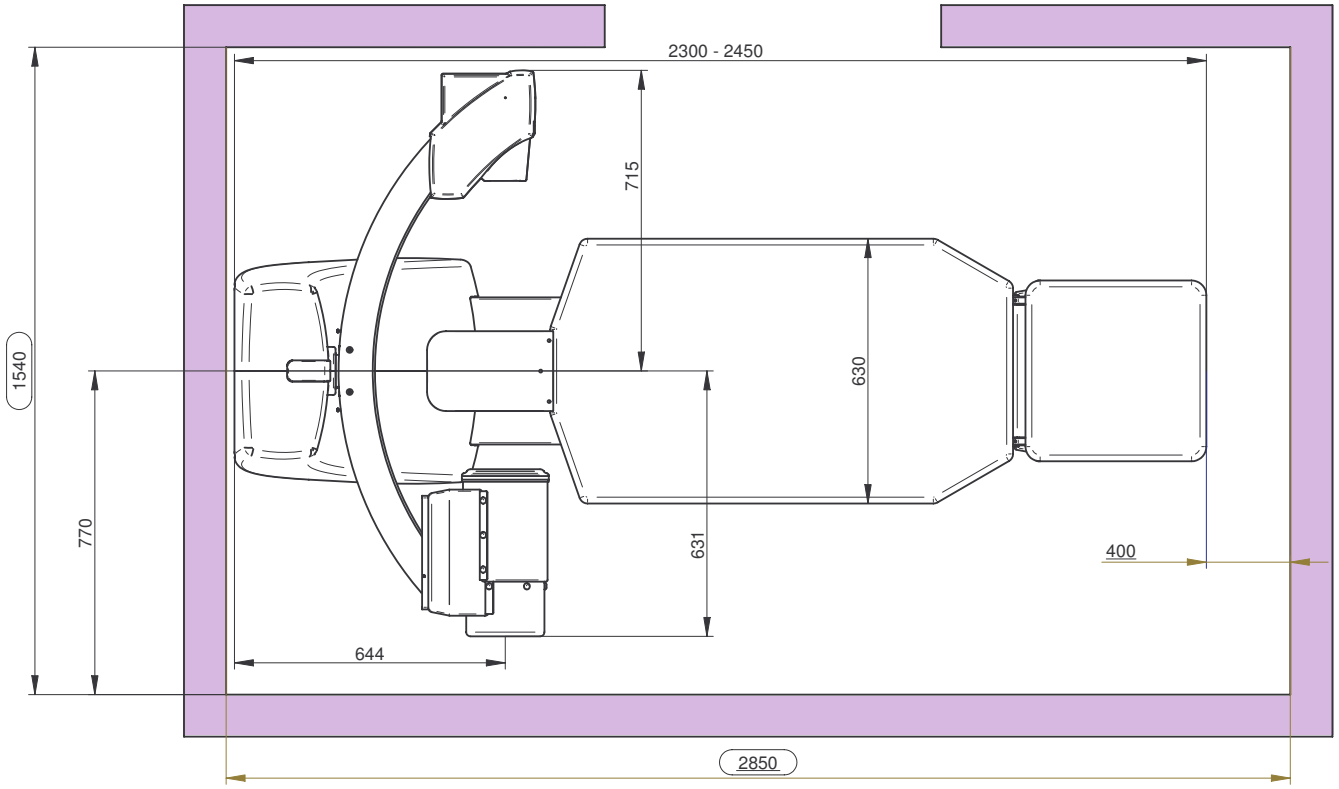


It has been shown that image quality is proportional to patient immobility during examination, as the slightest movement can produce blurred or poorly defined images. Patient immobility is therefore a fundamental prerequisite for good extra-oral radiography, even more fundamental if images are 3D images. Research has shown that patient immobility is far better when patients are lying down than when they are in an erect position (standing or seated). So MyRay has chosen to go the supine way, conceived for total patient relaxation. The motorized table can be lowered to facilitate patient access; the patient can lie and relax thanks to the comfortable headrest; the field of view is not hindered and the whole procedure becomes more pleasant and easier for both the patient and the operator. Moreover, an automatic placement procedure based on a sophisticated algorithm allows the operator to centre the anatomic area of interest directly from a virtual console on the computer.

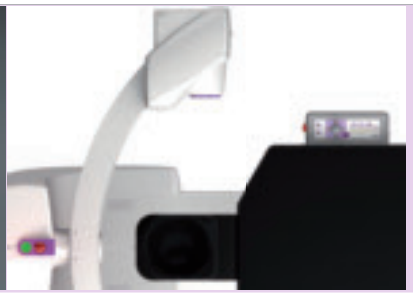
After acquisition, SkyView proceeds with volumetric reconstruction. A very brief operation: 4 minutes of precision and quality.

SkyView

3D imager with Cone-Beam Technology



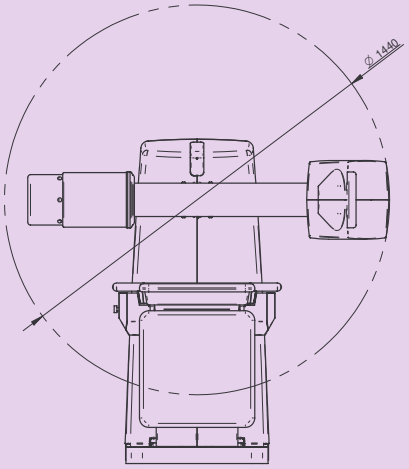
SkyView in your dental practice

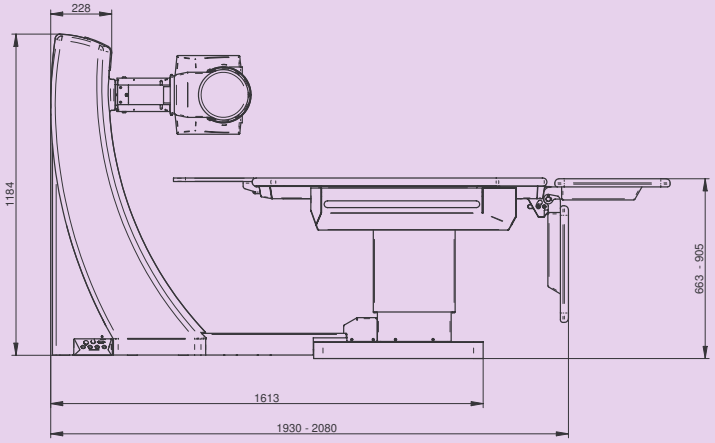


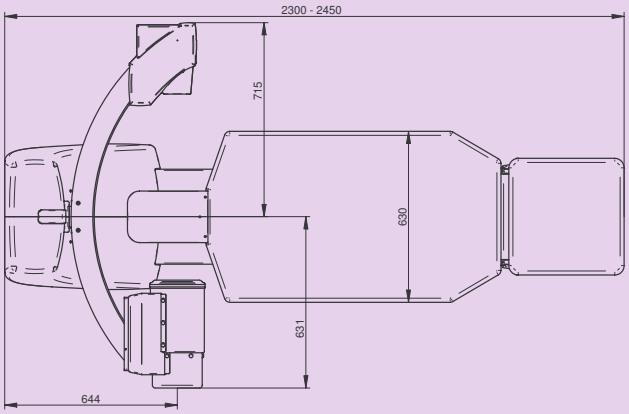
SkyView is a compact, professionally designed device. Dimensions, including the patient table, are 150 cm (width) x 240 cm (length) x 170 cm (height). The X-ray source is an X-ray tube with 90 kV output, comparable to that of a panoramic dental system. This makes it easy to install SkyView in any dental surgery: as a matter of fact, the radioprotection requisites are comparable to those of a panoramic dental system.

For radioprotection, please refer to current local law. The minimum dimensions for a room in which to install SkyView are approximately 160 cm x 260 cm. More spacious rooms will certainly improve user experience. The room must allow easy access to one of the two table sides; you can choose to have the control panel installed on either side of the patient table.

skyVIEW







Technical data

X-ray beam	Cone
X-ray source	90 kVp /10 mA (max)
Additional filter/collimator	Remote controlled
Focal spot	0,5 mm
Patient position	Supine
Positioning	3 LASERS and 1 console
Patient table	3 motors (X-Y-Z)
Image detector	Dual Field Image Intensifier with Digital CCD camera 1000x1000
Gray levels	4096 (12bit)
Reconstructed volumes	11 x 11 x 11 cm^3 or 7 x 7 x 7 cm^3 (*)
Scan time	Standard mode: 15 seconds (options of 10, 20 seconds)
Spatial resolution	0,2 x 0,2 x 0,2 mm^3 or 0,14 x 0,14 x 0,14 mm^3 - isotropic voxel
Reconstruction time	Under 4 minutes
Preview reconstruction	Real time
Footprint	150 x 240 cm
Reconstruction algorithm	Proprietary “Feldkamp back-projection”
Weight	360 kg

(*) The high resolution zoom with a field of view 7 x 7 x 7 cm^3 is optional and is not provided on the standard device.

www.my-ray.com

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