



VILLA  
SISTEMI  
MEDICALI

DENTAL  
LINE



**Strato 2000**  
Dental Panoramic System  
**Strato 2000 Full Digital**

# Strato 2000

great diagnostic results



STRATO 2000 is the innovative system that grows along with your needs, from the basic panoramic application to the study of the TMJ and the paranasal sinuses up to the sophisticated tomographic exams for implantologic applications. All this together with user friendliness and accuracy of results at the highest level.

## **Strato 2000: reliability and technology**

### **Sure diagnostic results**

Primary feature of Strato 2000 is the guarantee of an excellent diagnostic result in every condition of use. We have put a special focus in the project to ensure the highest image quality aiming at improving the diagnosis, but also at maximizing the workflow.

### **Multi-motor technology**

The motion of the rotating arm is obtained with three independent axis of movement controlled by software algorithms that can be easily expanded and modified to adapt to new and different needs.

### **Motorized telescopic column**

The column has a dual-speed motorized movement for quick and precise patient positioning; an additional activation button prevents unwanted movements. The telescopic movement has three mounting positions that allow quick adaptation to rooms with any ceiling heights.



### **Patient and operator safety**

All the x-ray parameters and all the moving parts are constantly controlled by software to minimize the effects of failures. In case of collision or power failure, the microprocessor interrupts the movements and allows the patient to abandon the examination position.



### **Accessory storage**

*The accessory storage compartment has 4 sterilizable trays that can accommodate the disposables and the accessories so to have them immediately available when required.*

*Motorized telescopic column*



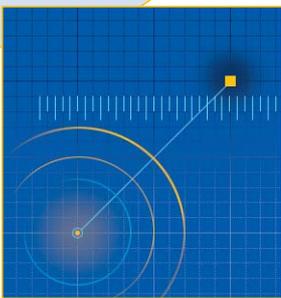
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## Strato 2000: the best image results



### Spine compensation

The compensation of the higher absorption due to the cervical spine is optimally achieved by a variable modulation of the exposure parameters during the entire movement.



### Constant magnification

All the images obtained in every examination program have constant magnification (in the center of the focal trough and in defined examination conditions). This feature allows to take reliable measurements of the anatomic structures.

### Anatomic programs

According to the type of exam selected, it's possible to choose among different anatomic programs: patient type child/adult, patient size small/medium/large, arch shape narrow/normal/wide. According to the combination of choices the system automatically selects the most suitable exposure parameters for the best image result.



### User interface

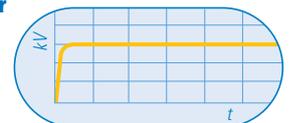
All the controls of Strato 2000 are placed on an ergonomic and easily readable control panel. All the messages towards the operator are shown on the LCD alphanumeric display that guides the user through all the phases of the examination procedure. The x-ray emission pushbutton is equipped with an extensible cable.

### HF Generator

The very low residual ripple of the constant potential generator can reduce the dose to the patient up to 20% compared to conventional systems. The wide range of regulation of the parameters ensures the best choice for every application.

### Automatic collimator

Strato 2000 incorporates a fully automatic collimator that selects among the available diaphragms the most suitable one for the selected exam to achieve the highest image quality and the lowest possible dose for the patient.



Strato 2000 in digital PAN only version features a fixed collimator.

## Strato 2000: quick, accurate patient positioning



### Chin rest

Strato 2000 is equipped with different chin rests suitable for every situation, including a specific support for edentulous patients. The height of the supports can also be adjusted to enhance the visibility of the chin on the radiography when required.

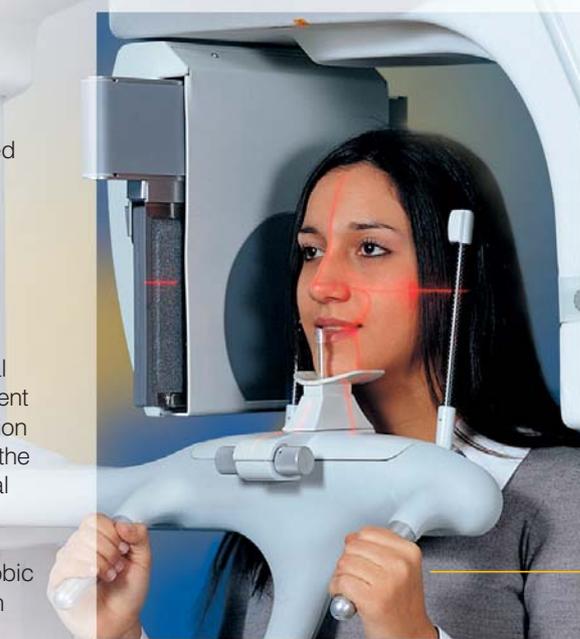


### Patient positioning

It's well known that the key factor for a good panoramic radiography is a correct positioning of the patient. Strato 2000 incorporates a number of features intended to minimize the positioning error and to guarantee the best possible radiographic result.

### Frontal positioning

It's the most reliable, fast and accurate technique to position the patient. The frontal positioning makes possible to see the patient and the console at the same time, in addition to reducing the possibility of errors due to the image reflection used in most conventional systems. Eye-to-eye contact between the patient and the operator increases the patient's trust and reduces the claustrophobic disease in non-collaborating patients such as children and elderly.



### Patients handles

The particular and ergonomic position of the handles has been studied to achieve three fundamental results: extend the cervical portion of the spine, lower the shoulders, ensure a strong and comfortable grip for the patient.

### Laser pointers

The perfect alignment of the patient is ensured by three laser beams that are used as a reference for an accurate alignment of the sagittal, canine and Frankfurt planes.

# Strato 2000 Full Digital

digital technology



# Digital

## Strato 2000 Full Digital: precise, immediate and economical results

The Full Digital version of Strato 2000 sets you free from films, cassettes, chemicals and issues related to their handling and disposal costs. Moreover, the reduction of retakes - resulting in higher patient throughput - will significantly reduce examination costs, guaranteeing a quick return on investment, with the additional benefit of giving a better service to your patients.

### Image quality

The system employs a state-of-the-art high resolution CCD sensor with a CsI (Cesium - Iodide) scintillator screen providing for exceptional sharpness and image quality. Images are transferred to the PC in real time via a high speed USB 2.0 connection and can be seen forming right on-screen during the exposure. This feature allows for an immediate feedback of the exposure accuracy and the reduction of retakes.

USB 2.0 ports are present in all recent PCs and there is no need for dedicated image acquisition boards, making it possible to operate Strato 2000 using a laptop.



### Always at the best

A powerful and user-friendly software will get the most out of each image. Post-processing features include filters, magnification, contrast, brightness and gamma adjustment, measurements, printing, as well as a complete patient archive management.

### Integrated environment

All examination setup activities can be performed using a "virtual keyboard" which replicates the Strato 2000 console functions on the PC. Examination setup time is considerably reduced, increasing the overall efficiency of your practice.

For instance, in the case of a returning patient, you can repeat an existing exam using the exact same settings previously employed, thus obtaining perfectly comparable images.

### Full Dicom connectivity

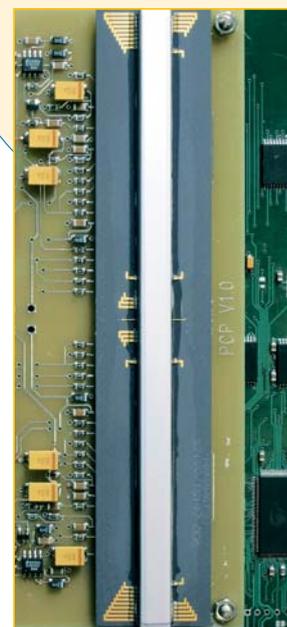
Strato 2000 guarantees a full integration with PACS networks and allows to send images to the department imagers



### Freedom of use

Image acquisition without connecting directly to a PC is also possible. The unit is in fact equipped with a slot for "CompactFlash" memory cards. Images acquired in this operating mode are stored on the CompactFlash card and can be transferred to any PC at your convenience after the acquisition, by inserting the memory card into an appropriate card-reader. Low cost CompactFlash cards are widely used in consumer digital cameras and are available in any electronics shop.

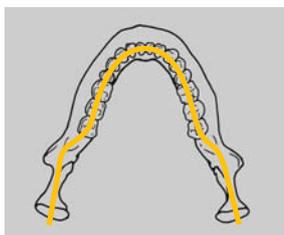
The high resolution CCD sensor with a CsI (Cesium - Iodide) scintillator screen



## Strato 2000 Panoramic

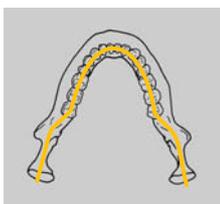
### Panoramic adult

The panoramic programs on Strato 2000 give you the highest flexibility to obtain the best possible results, irrespective of the type of patient. The choice of anatomic programs includes three patient sizes and three arch shapes for a total of 9 different choices.



### Panoramic child

The child program has been developed especially to adapt to the particular anatomy and to reduce to the minimum the delivered dose thanks to an accurate choice of parameters.



### Emipanoramic

To reduce the patient's dose when the area of interest is just a portion of the arch, it's possible to select the Emipanoramic program which takes an image of just the left or right half of the arch.

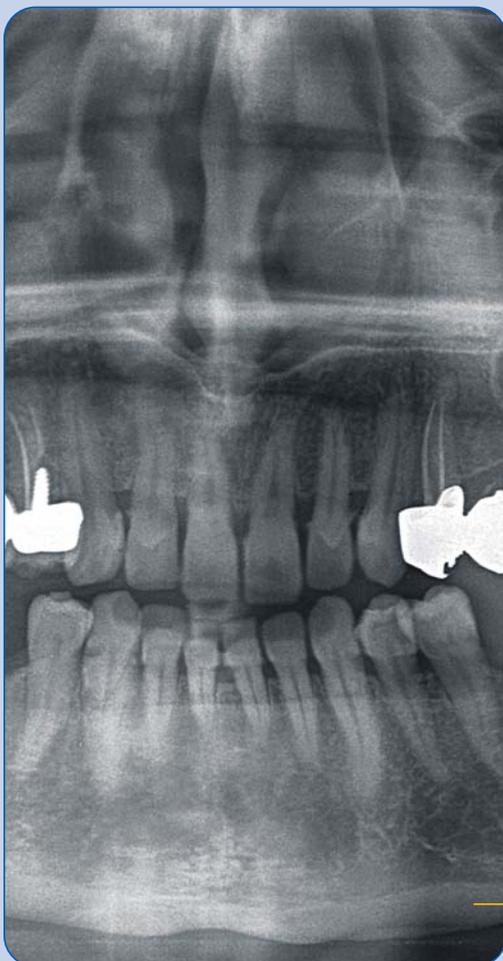


## Strato 2000 Advanced Dental Applications

### A.D.A. package

#### Improved Orthogonality Dentition

Is a panoramic projection taken with the X-ray beam constantly orthogonal to the arch to reduce the overlapping of adjacent teeth and improve the visibility of interproximal caries.



#### Frontal dentition

It's a panoramic limited to the frontal dentition, from canine to canine, that allows to reduce considerably the patient dose.



#### Low dose panoramic

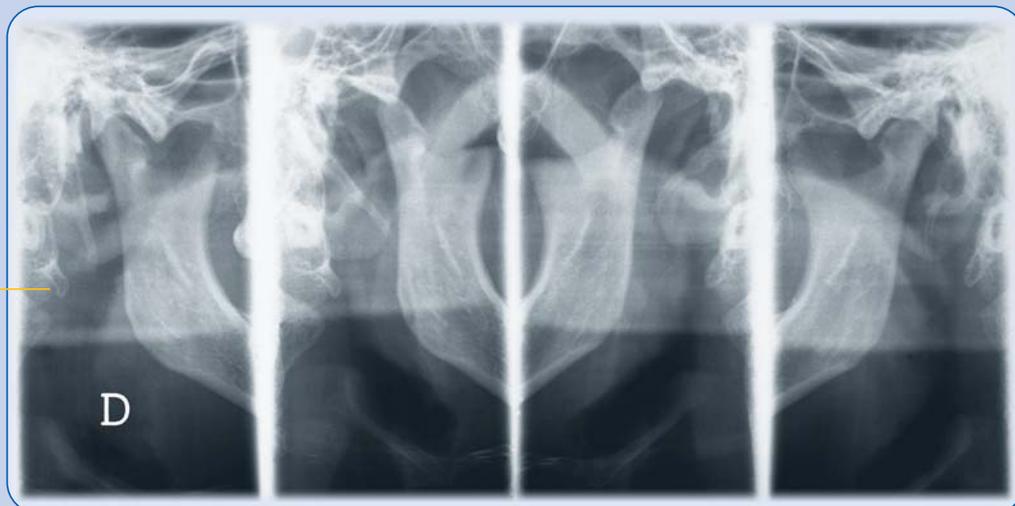
The angle of rotation is reduced so to exclude the ascending ramus from the image. The result is a panoramic limited to the dentition area using a reduced patient dose.

## Strato 2000 ATM / SINUS

### ATM package

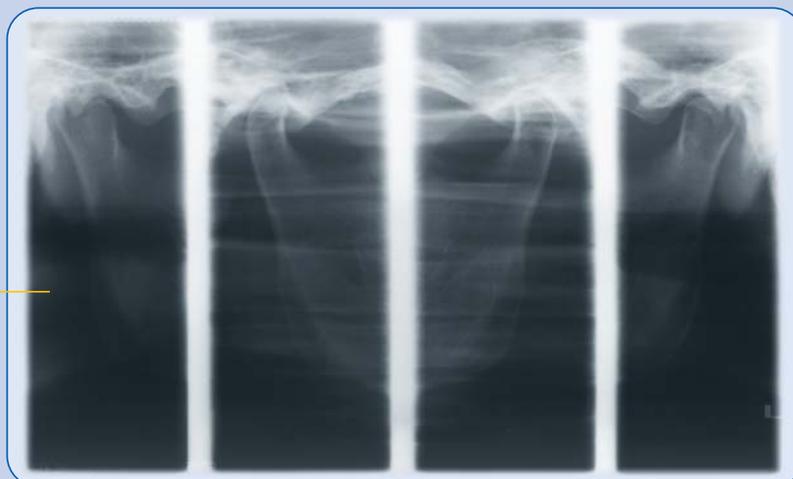
#### Open-Closed mouth ATM

Four images are taken on the same film: left joint open, left closed, right closed, right open. This exam allows to evaluate the movement of the condyle inside the fossa.

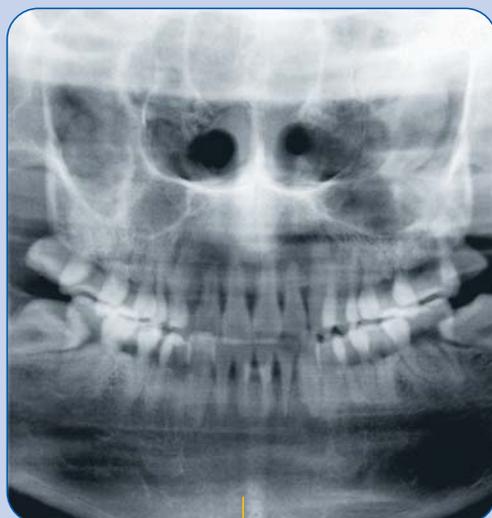


#### Bi-Axial ATM

Once again four images are taken. The mouth is kept closed and two different projection are taken for each joint. One projection is parallel to the long axis of the condyle, the other is taken at an angle of 40°.



### SINUS package



#### P-A Maxillary SINUS

Allows to take a Postero-Anterior view of the maxillary sinuses.



#### L-L Maxillary SINUS

It's complementary to the P-A view and allows to take Lateral projections of each maxillary sinus.



## Strato 2000 Implant\*

The Implant application package allows to perform exams by using the linear tomography technique thus expanding the diagnostic latitude of the system to implantologic treatments.

The Implant program allows to take very thin longitudinal and transversal slices in every position of the arch, for a correct treatment planning, but above all for an effective post-intervention follow-up directly in your office.

\* Available in analog version only

### Patient positioning

The patient is positioned using dedicated bites that guarantee high patient comfort. The wide movement range of the rotating device allows to take the tomographic cuts in every position of the arch always keeping the patient in frontal position without the need of uncomfortable head rotations.

### Diagnostic target selection

A unique technology allows the selection of the position of the cuts without the need of taking plaster casts, but simply by entering the tooth number via the console.



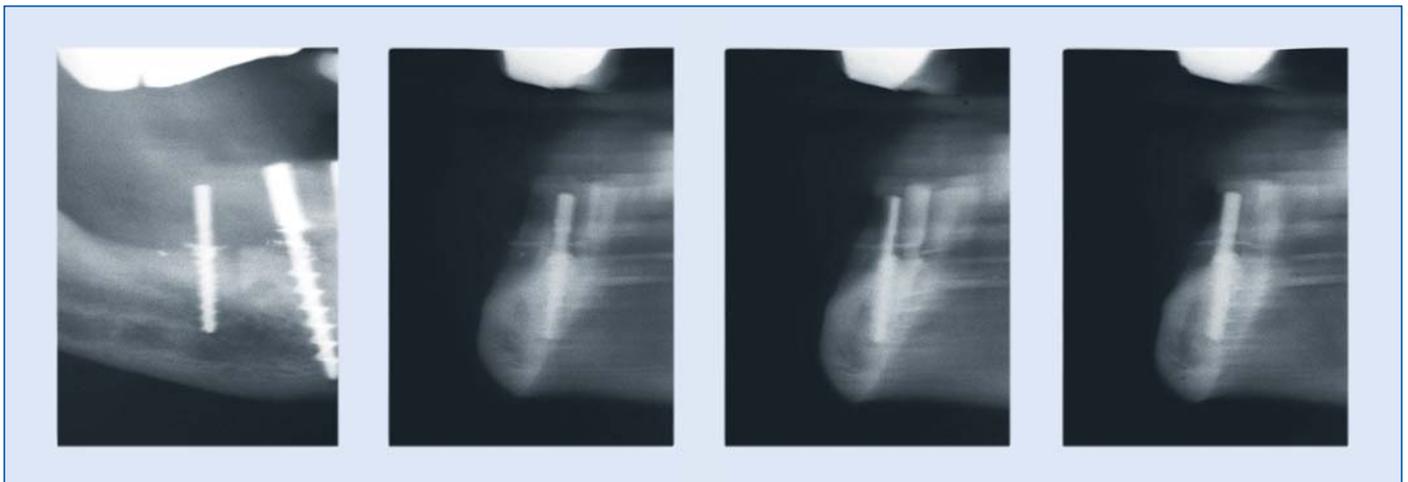
#### The ruler

A calibrated ruler supplied with the package allows to take accurate measurements on the film to compensate a possible deviation of the real slice position from the theoretical location.



#### The Bite

Two different bites allow to perform the exam in every possible condition.

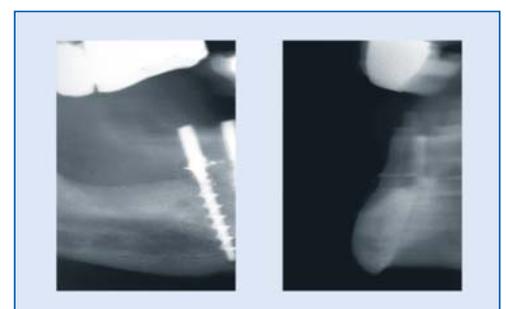
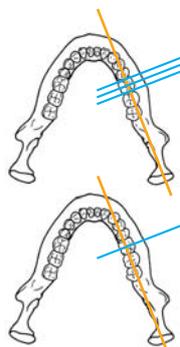


### IMPLANT 4 exam

One longitudinal section 4, 6 or 8 mm thick and three transversal sections having 2, 3 or 4 mm thickness and distance are taken on one film.

### IMPLANT 2 exam

A reduced exam is also available to take just one longitudinal and one transversal slice.



## Strato 2000 Ceph



### Wrist and hand application

*A specific program for the execution of the carpal exam can be used to evaluate the bone growth factor in children.*

### Cephalometric exam\*

Strato 2000 can be fitted with a cephalometric arm, allowing to include orthodontic procedures within the scope of possible applications. Strato 2000 can be upgraded at any time directly in your practice.

\* Option not available in Strato 2000 digital PAN only.



### Dual detector

Strato 2000 in the digital version features a second detector dedicated to cephalometric examinations so that the unit is always ready for use, without the need of having to move the digital sensor and thereby eliminating the risk of damage due to shocks or dropping the sensor itself.

### Geometry without distortions

In both analog and digital versions, Strato 2000 guarantees images with constant magnification in both horizontal and vertical axis.

The horizontal scanning movement of the cephalometric detector is synchronized with the primary collimator and the entire scanning is obtained maintaining the focus in a fixed position. That's why Strato 2000 Digital guarantees the same projection geometry as if using film, allowing to accurately determine the main reference points for orthodontic analysis.

# Ceph



## **Soft tissues filter**

*To enhance the soft tissue profile in lateral projections, Strato 2000 employs a motorized soft tissue filter. The position of the filter can be adjusted to fit the profile of each patient. A scale on the head positioner indicates the correct filter position. A radio-opaque reference tool inside the filter adjustment bar allows for spatial calibration of the images.*



## **Image format**

Strato 2000 in analog version can be ordered with the collimator set to operate primarily with 18x24 cm or 24x30 cm cassettes. In each configuration it is possible to choose four different types of projections. The correct collimator (among the four available) is automatically set according to the examination mode.

In the digital version it is possible to select the image width between 18, 24 and 30 cm. The operator can choose to work either in high resolution mode that allows for more defined detail, or in high speed mode that guarantees dose reduction to the patient and a decrease of artifacts due to children movements. A standard L-L- ceph image can be taken in just 4.5 seconds, one of the best values on the market.

## Strato 2000 UCA and DMS applications



### UCA: User Customizable Applications

The "U.C.A" (User Customizable Applications) technology will allow you to expand the scope of application of your system in a quick and effective way thanks to upgrade packages that you will be able to install into the unit by yourself using a normal PC.

The system can be tailored to your needs in a unique way and it's open to accept any improvement and change both in your needs and in the examination techniques.



### DMS: Data Management System\*

The "D.M.S" (Data Management System) is the key to complete management of the archive of patients and related exams, to keep track of the exposure data of each exam taken. With the DMS software you can plan the next exams directly from your PC thanks to a "virtual console" that can be used for instance to repeat a previous exam using exactly the same parameters as before, so to obtain images that are perfectly comparable.

With the software you can also print labels to be put on the X-ray films for easy identification.

\* D.M.S. is available in analog version only

### EXAMINATION PROGRAMS

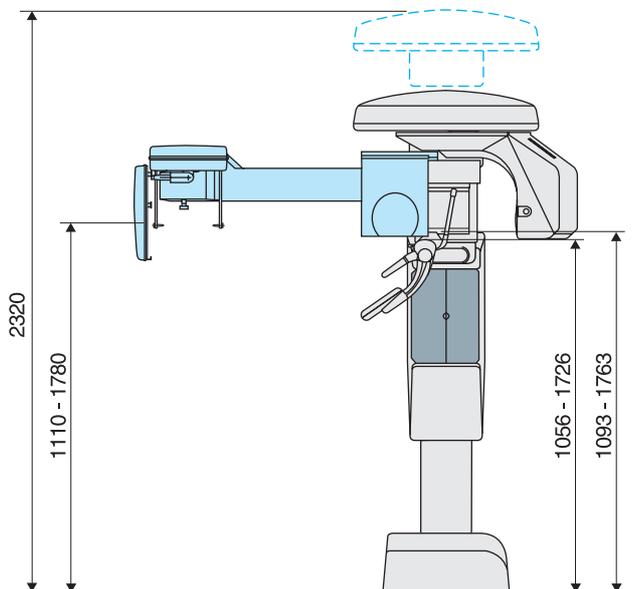
	Strato 2000 Analog	Strato 2000 Digital PAN	Strato 2000 Full Digital
Adult/child panoramic Right hemipanoramic Left hemipanoramic	●	●	●
<b>SINUS package</b> maxillary sinus L/L; maxillary sinus P/A	●		
<b>TMJ package</b> open/close mouth TMJ; bixial TMJ	●	●	●
<b>ADA Package (Advanced Dental Application)</b> Improved orthogonality dentition; frontal dentition; low dose panoramic	●	all exams available as DXP package	all exams available as DXP package
<b>Implant package</b> Implant 2; Implant 4	●	●	●
<b>Cephalometry</b>	●	●	●

● standard ● optional ● not available

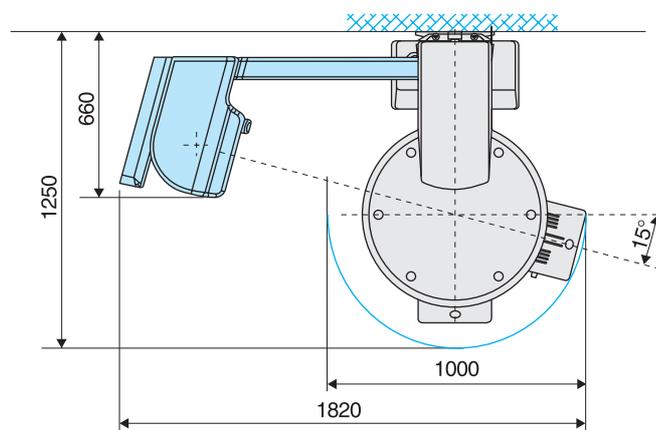
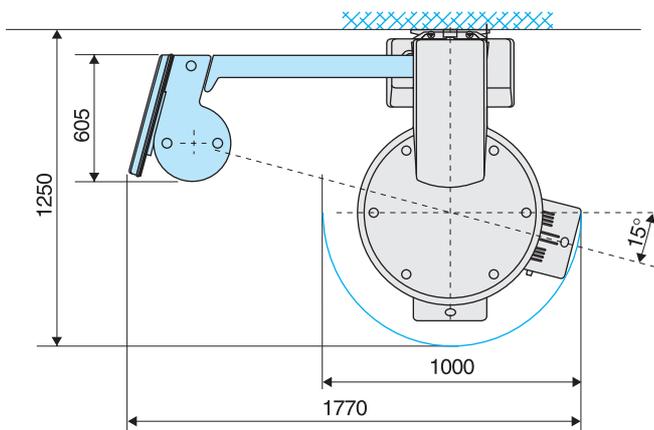
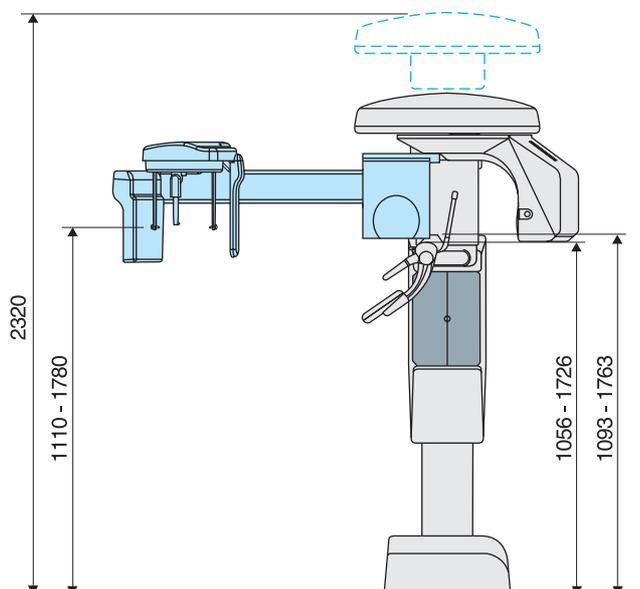


# Strato 2000 Technical data

**Strato 2000**



**Strato 2000 Full Digital**



	Strato 2000	Strato 2000 Full Digital
Weight	Without ceph arm 135 kg With ceph arm 150 kg	Without ceph arm 135 kg With ceph arm 160 kg
High voltage	50-80 kV	50-80 kV
Anode current	4-10 mA in 1 mA steps (4-12 mA in 1 mA steps for ceph)	4-10 mA in 1 mA steps (4-12 mA in 1 mA steps for ceph)
Focal spot	0.5 (IEC 336)	0.5 (IEC 336)
Exposure times	Panoramic: 15 sec adult, 13.5 sec child Open/close mouth TMJ: 4x2.65 sec Ceph: 0.2÷3 sec	Panoramic: 15 sec adult, 13.5 sec child Open/close mouth TMJ: 4x2.65 sec Ceph: 4.5 ÷ 15 sec
Power supply voltage	230/120 Vac ± 10% single phase, 50/60 Hz	230/120 Vac ± 10% single phase, 50/60 Hz
Absorbed current	8 A @ 230 V; 15 A @ 108 V	8 A @ 230 V; 15 A @ 108 V
Power rating	2 kVA	2 kVA
Image format	Panoramic, Implant, Sinus, ATM, other exams: 15x30 cm flat cassette; Ceph: 18x24 or 24x30 cm	Panoramic, Sinus, ATM, other exams: 15x30 cm Ceph: max 30x22 cm
Image matrix	N/A	Panoramic: 2805x1536 pixels Ceph: max 3020x2305 pixels
CCD pixel size	N/A	48 µm
Effective image resolution	N/A	5.2 lp/mm
Grey levels	N/A	4096, 12 bits (in acquisition)

Products are continuously under review in order to guarantee the highest possible quality standards and the implementation of technological progress. Effective specifications can therefore vary and may be subject to modification without prior notice.

**Villa Sistemi Medicali** long-standing experience at the service of our customers



**Competence  
in x-ray systems**

Villa Sistemi Medicali specialists can provide qualified information on new x-ray systems, room structure and installation and equipment positioning.

**A wide range  
of equipment**

Villa Sistemi Medicali is among the major European manufacturers of radiological systems and offers a wide range of products, such as:

- Digital radiographic and angiographic systems
- Remote controlled tables
- Classical tilting tables
- General rad floating tables
- Chest stands
- Mobile units
- Surgical C arms
- HF Generators
- Dental units, Intra-oral and panoramic

**Our priority:  
Technical Service**

A wide network of highly skilled service engineers ensures effective and reliable maintenance of all Villa Sistemi Medicali equipment installed worldwide. Preventive maintenance programs and Service Contracts are adapted to the needs of our customers

**Logistic services:  
a widespread presence**

Spare parts, accessories and consumables are shipped daily by Villa Sistemi Medicali to all its customers worldwide.

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