

Dental  
Line



**ROTOGRAPH evo 3D**

Dental Panoramic and 3D system

Villa Sistemi Medicali is proud to introduce its new Rotograph Evo 3D, dental imaging system with **3-in-1 functionality**: Panoramic, Cephalometric, 3D. This new machine is based on the highly regarded mechanical platform of the Rotograph Evo, now adapted mechanically and electronically to operate with the latest **"Cone Beam" technology** allowing 3D reconstruction of the jaws.

Core of the Rotograph Evo 3D is the innovative **Flat Panel Detector (FPD)** using **Amorphous Silicon** technology associated with **Cesium Iodide (CsI)** scintillator. Thanks to its peculiarity to work in either Panoramic or 3D modality, **Pan images are acquired directly** and not reconstructed from a volume, thus have the same layout usually visible on traditional Pan units; and thanks to the unit's **3D Field of View of 8,5x8,5 cm**, the entire dental status of the patient is commonly visible at a glance, without the need to make different exposures to obtain it.

The result is a **complete diagnostic tool**, featuring the most advanced technology, yet **easy to be used** like a normal dental panoramic system. And in order to give to our users the **maximum flexibility** and grant the **safeguard of the investment**, the Rotograph Evo 3D can be integrated with a digital **Cephalometric arm**, or **upgraded at a later stage** in case of need.





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**Outstanding imaging performance:  
definitely our best advertising**

**Users and patients at the core of our know-how**



**Customizable according to user's needs**

The Rotograph Evo 3D can be customized according to the needs of virtually any user, by acting on its **Examination Modules**. Particularly, a Cephalometric arm can be mounted for professionals needing to integrate the **Pan** and **3D** views with **Ceph** analysis; and the **Evo Xp** Examination Module further enlarges the traditional Panoramic views, not limiting the 2D imaging to the Standard Panoramic projection.



**A complete diagnostic tool**

Thanks to its **Field of View (FOV) of 8,5x8,5 cm**, on the Rotograph Evo 3D the entire dental status can usually be visualized with a **single, fast exposure**, with images ready to be archived and treated with Dental Studio Software.

Alternatively, should the user prefer to export the acquired images and use a 3rd party Software, Dental Studio can easily give as output the full set of **slices in DICOM format**. Differently, when the system is used in

**Panoramic or Cephalometric mode**, the images are **acquired directly** in bi-dimensional format and not reconstructed from the 3D volume; as a consequence, they are therefore displayed with the typical **standard 2D layout**.

## Simple to operate

Despite its huge technologic content, the Rotograph Evo 3D is extremely easy to operate. All commands and functions are given through its **main keyboard mounted directly on board**, in order to be able to set the machine right during the patient positioning phase.

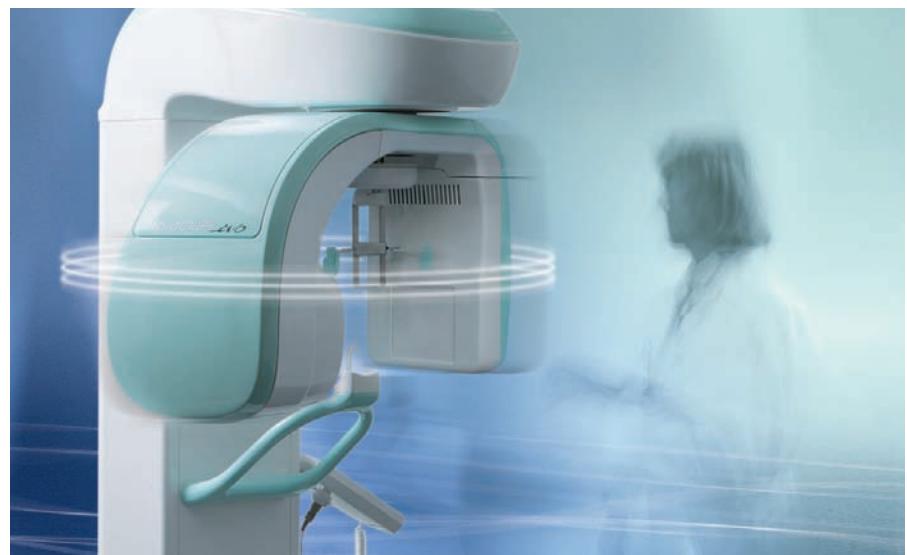
Alternatively, should the user prefer to set the system from the workstation, all commands are replicated on the **virtual keyboard** on it available, where a **specific guided procedure** will drive the user for an appropriate system setting, starting from exam selection till setting of exposure parameters.



## Fast and accurate

We know that time is important for any user, from the smallest practice to the largest hospital. For this reason the fully-integrated Pan-3D detector is **always ready to use**, without need to operate on it to switch from Pan to 3D acquisition modality: the **machine commutes automatically** from 2D to 3D simply by acting on the user interface.

Additionally, as long as the Field of View allows to commonly see the entire dentition, the user can **save the time** needed to position the patient on a specific tooth. Finally, the X-ray time itself is limited to around 11 seconds, in order to make the entire **procedure particularly fast**, while **reducing the radiation dose**.



## Accessible to any patient

As long as **every patient is important to us**, our priority was to develop a system **not creating accessibility limits** and **surpassing the restrictions** given by systems requiring the patient to seat on an integrated chair or laying on an integrated bed.

Particularly, **patients on wheelchairs** can be easily accommodated on the Rotograph Evo 3D.

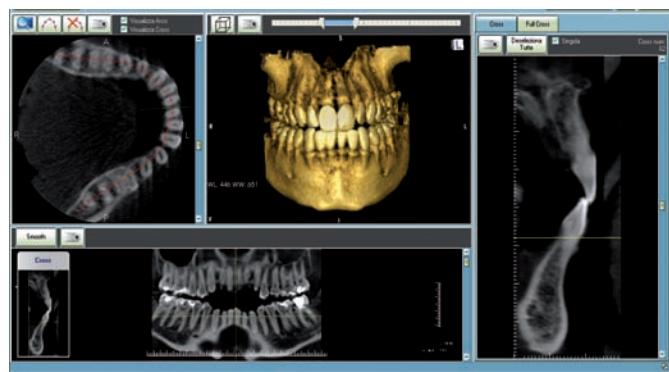


## Our technology at your service

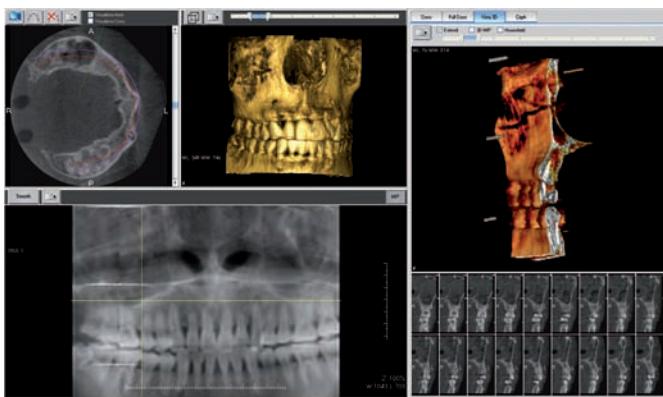
### Dental Studio Software 3D capabilities

The advanced technology of the Rotograph Evo 3D allows to see the images on the workstation in *real time*, while the machine is rotating; simultaneously, the **3D reconstruction module** creates the volume using a specific algorithm for *artifact reduction*. Once the volume reconstruction is completed, the **3D visualization module** shows the entire dental status on a single view, thus giving a great support on the study of the single specific case.

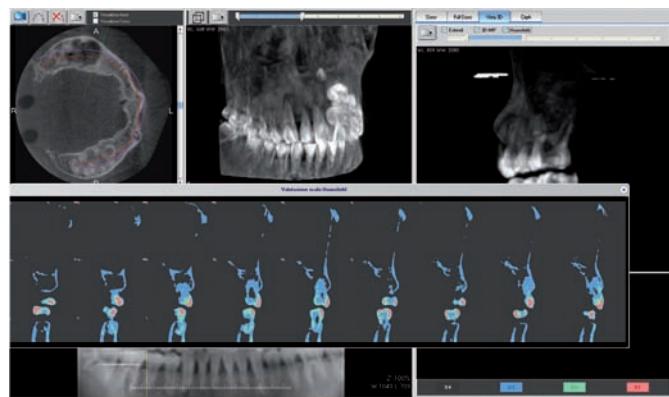
The representation of the windows is *loaded automatically* during the first acquisition and it's then *fully customizable* by the user. Once the image is obtained, the Dental Studio imaging Software makes then available to the user all our expertise in terms of *image treatment* and specific **3D planning**.



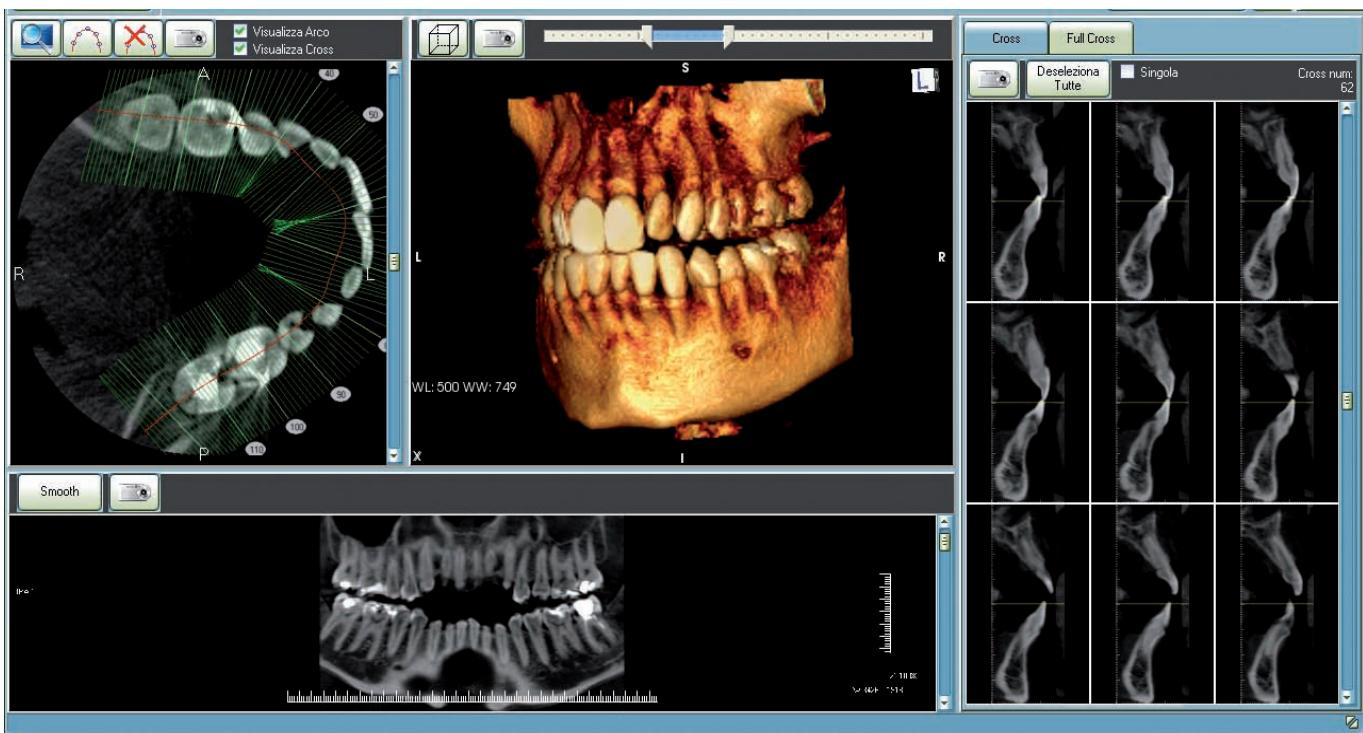
Multiple visualization with Panoramic and Paraxial



3D reconstruction of the Paraxial



Multiple visualization with use of Hounsfield scale



Standard 3D visualization

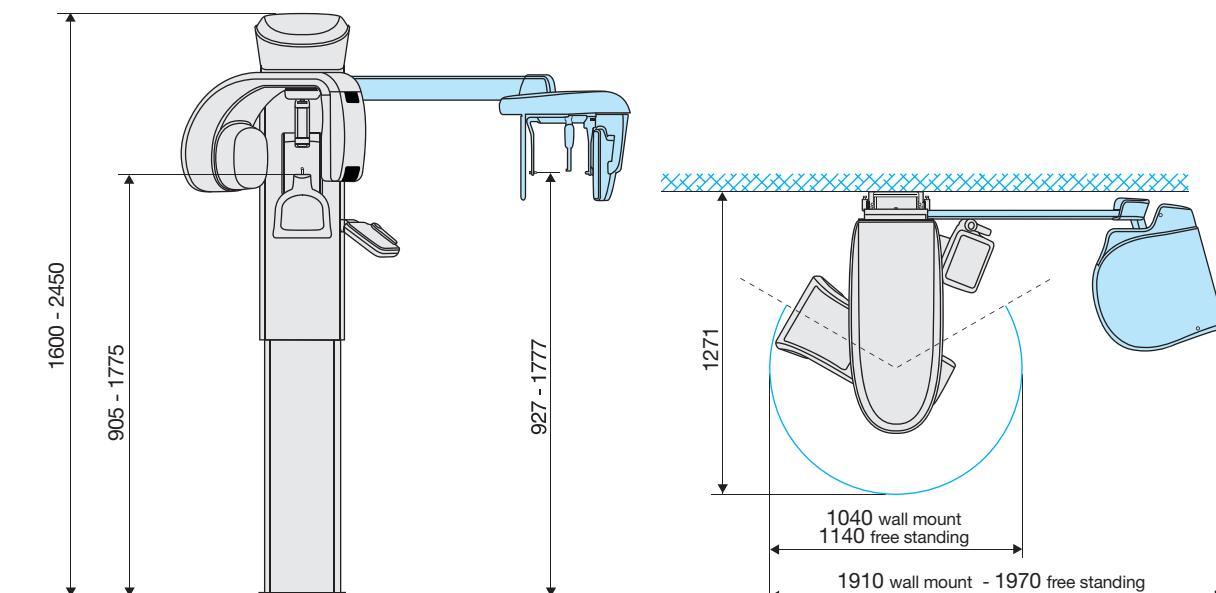
## Technical Data

Movement technology	Multi-motor with digital trajectory control
3D Technology	Cone Beam Computed Tomography (CBCT)
Generator	High frequency (200 kHz), constant potential
Focal spot size	0.5 (EN 60336)
<b>Pan + 3D sensor</b>	
Technology	Amorphous Silicon Flat Panel with Cesium Iodide (CsI) scintillator screen
Active area	130 x 130 mm
Pixel size	127 $\mu$ m
Voxel size	166 $\mu$ m
Reconstructed volume shape and dimensions (FOV - Field of View)	Cylindrical, 85x85 mm (diameter x height)
<b>Ceph sensor</b>	
Technology	CCD sensor with Cesium Iodide (CsI) scintillator screen
Active area	6x220 mm
Pixel size	48 $\mu$ m
Image dimension	3000 x 2305 pixels (Max Ceph)
<b>Electrical characteristics</b>	
Power supply voltage	110-120 / 220-240 Vac
Frequency	50/60 Hz
<b>Mechanical characteristics</b>	
Weight of Pan-3D system	161kg (354 lb) for wall mount; 191 kg (411 lb) for floor mount
Weight of Pan-3D-Ceph system	186kg (409 lb); 216 kg (475 lb) for floor mount
Total height max	2450mm (96,4")
Mounting capabilities	Wall mount (standard) or floor mount (with optional floor base)

## Examination Modules

Pan Module	3D Module	Evo XP Module	Ceph Module
Adult Panoramic	Full Dentition	Half Panoramic adult	Lateral Ceph
Child Panoramic	Left Jaws	Half Panoramic child	A-P and P-A Ceph
Open-closed mouth lateral TMJ	Right Jaws	Orthogonal Projection	Carpus (hand)
P-A Sinus (rotational)	Sinus	Low Dose Panoramic	
		Frontal Dentition	

## Dimensions





### 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, panoramic and 3D

### 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.