

# *rotograph evo 3D*

*Dental Panoramic and 3D CBCT System*



*radiology ahead*

# the innovation in dental imaging

**3in1**

A 3-in-1 system  
equipped with Cone  
Beam technology



A system that can  
be updated with the  
Cephalometric arm



A single sensor for  
3D and panoramic  
imaging, for maximum  
convenience and  
efficiency



Multiple 3D volumes  
for maximum dose  
reduction



Graphic touch-screen  
interface for rapid  
and intuitive control



Dicom functions, for  
complete integration  
with hospital and  
facilities networks

Rotograph Evo 3D is our high-end dental imaging system based on the latest *Cone Beam Computed Tomography* (CBCT) image technology, which enables 3D reconstruction of volumetric images of the patient's dentition.

Rotograph Evo 3D is built around the innovative Cesium Iodide-Amorphous Silicon *Flat Panel detector* that operates in both 2D panoramic and 3D mode.

This capability allows the imaging system *to acquire both jaws with a single 3D scan*, and to obtain a real panoramic image by selecting the 2D mode, without being reconstructed from a 3D scan.

The Rotograph Evo 3D can be equipped or upgraded at a later stage with a *digital Cephalometric arm*; this flexibility guarantees your investment whether your operational requirements would change. The result is a comprehensive diagnostic instrument having 3-in-1 function capabilities and offering the *most advanced technologies* while remaining easy to use thanks to the new touch-screen console.



advanced



*imaging*

# a simple and effective system



## Customizable to user's needs

The Rotograph Evo 3D can be customized according to needs of virtually any user thanks to the selection of its *Examination Modules*. In particular, in addition to the 3D application, the *Evo XP* Examination Module further extends the traditional Panoramic views, so that 2D imaging is not limited to the standard panoramic projection. Moreover, a Cephalometric arm can be installed to integrate the panoramic and 3D views with Ceph analysis.

## Accessible to any patient

Our priority has been to develop a system with no limit of *accessibility* and able to overcome the restrictions of systems requiring the patient to sit down on an integrated chair or on a couch aside the unit. In fact, all wheelchair-user patients can be comfortably examined on the Rotograph Evo 3D with no need for adjustment operations.

## New touch-screen console

Although the high level of technological contents, the Rotograph Evo 3D is extremely easy to use thanks to the touch-screen control panel mounted on-board. Its *intuitive graphical user interface* provides an access to each function with just few touches; this makes the Evo 3D really fast and pleasant to use.

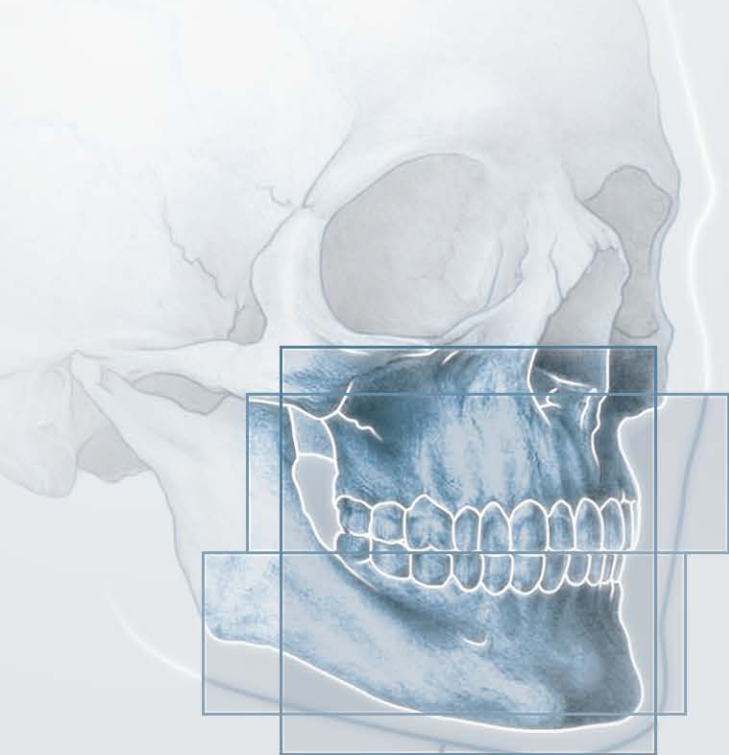
Alternatively, if the examination parameters are to be set from the workstation, all commands are replicated on the *virtual keyboard* displayed on the monitor.

## Fast and accurate

The *integrated 2D-3D sensor* is always ready-to-use, with no need for the operator to perform operations to switch from Panoramic to 3D acquisition mode: the system automatically switches from 2D to 3D simply operating from the user interface.

The patient positioning procedure is also extremely rapid as the reconstructed volume normally allows you to view the whole dentition.





### A complete diagnostic tool

With the 93 mm x 82 mm *3D volume* (FOV) the patient's whole dentition can be displayed in a *single and rapid exposure*, with images ready for processing and storing using the acquisition and processing software.

When the diagnostic requirements are localised on a single dental arch, the system enables selecting *two reduced volumes of acquisition*, dedicated to the upper or lower jaw, reducing considerably in this way the dose delivered to the patient.

When the system is used in Panoramic or Cephalometric mode, the images are directly acquired in two-dimensional format and not reconstructed from a 3D volume.

*quality & productivity*

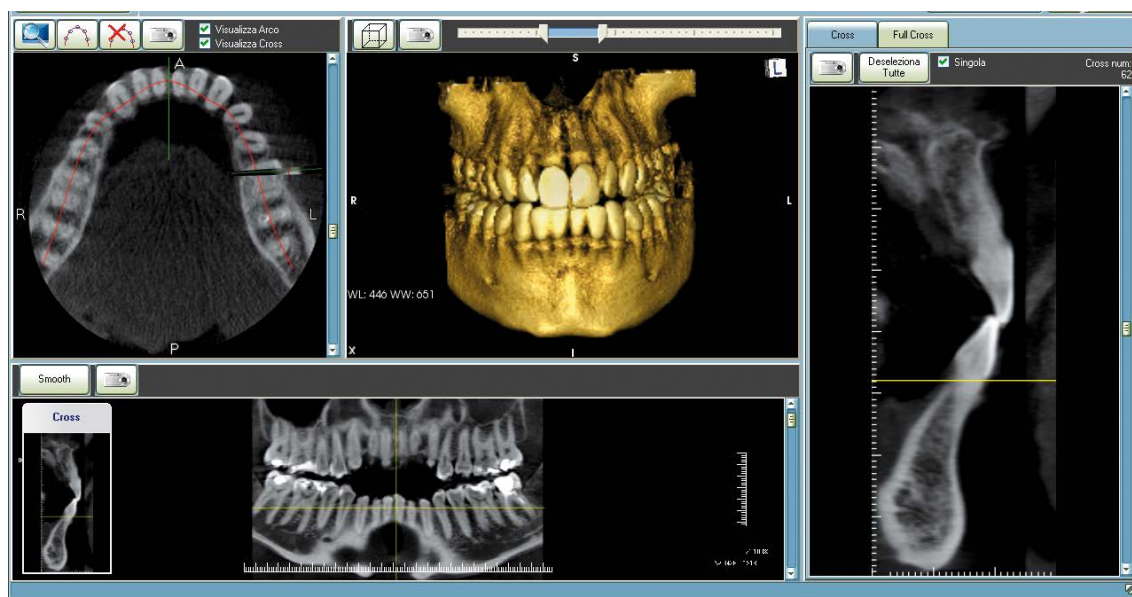




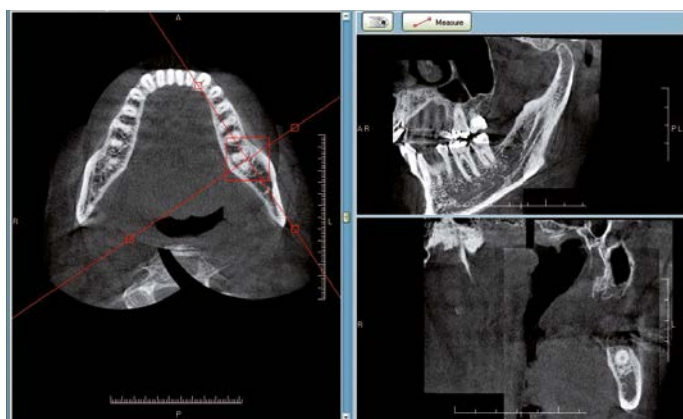
# a superior image quality

## Dental Studio Plus Software 3D capabilities

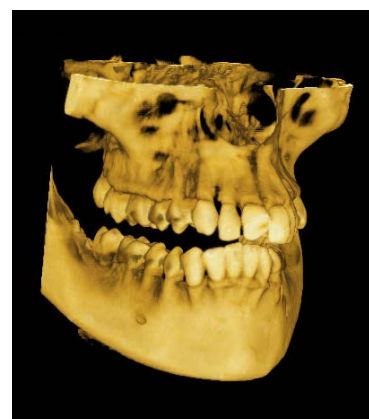
The advanced technology of the Rotograph Evo 3D means that the images can be displayed on the workstation in real time, while the unit is rotating. The 3D reconstruction module simultaneously reconstructs the volume using a *dedicated artefact-reduction algorithm*. The software window views are automatically arranged during the first acquisition, but then are *completely customizable by the user*. Once the image has been obtained, the *Dental Studio Plus software* gives the user our whole range of competence in 2D and 3D image processing, facilitating patient clinical management and treatment planning.



*Multiple visualization, with Panoramic and Paraxial*



*MPR view, with the typical navigation tool*



*3D volume reconstruction,  
in its standard format*

## Rotograph Evo 3D Technical Specifications

### Examination Modules

<b>Panoramic Imaging Module</b>	Adult panoramic Child panoramic Open-closed mouth lateral TMJ P-A Sinus (rotational)
<b>3D Imaging Module</b>	Complete dentition Maxillary/mandibular dentition Left TMJ Right TMJ Sinus
<b>Evo XP Module</b>	Adult half-panoramic Child half-panoramic Orthogonal panoramic Low dose panoramic Frontal dentition Bite-wing
<b>Cephalometric Imaging Module</b>	Lateral Cephalometry A-P and P-A Cephalometry Carpus (hand)

### Technical Data

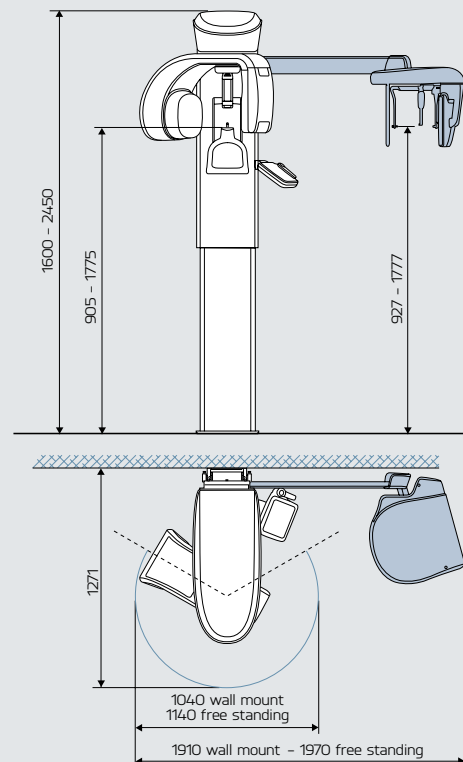
#### General Characteristics

Scanning movement technology	Multi-motor with digital trajectory control
3D technology	Cone Beam Computed Tomography (CBCT)
Generator	High-frequency (200 kHz), constant potential
Focal spot	0.5 (EN 60336)

#### 2D + 3D Sensor

Technology	Amorphous Silicon Flat Panel with Cesium Iodide (CsI) scintillator screen
Active area	130 mm x 130 mm
Pixel size	127 µm
Reconstructed volumes size (FOV – Field of View)	Complete dentition: 93 x 82 mm (diameter x height) Maxillary dentition: 93 x 40 mm (diameter x height) Mandibular dentition: 93 x 52 mm (diameter x height)

### Dimensions



#### Cephalometric Imaging Sensor

Technology	CCD sensor with Cesium Iodide (CsI) scintillator screen
Active area	6 mm x 220 mm
Pixel size	48 µm
Image size	220 mm x 300 mm (maximum dimension)

#### Electrical features

Power supply voltage	110 V –120 V / 220 V –240 V
Frequency	50 Hz / 60 Hz

#### Mechanical features

2D–3D system weight	161 kg wall mounting; 191 kg floor mounting
2D–3D–Cephalostat system weight	186 kg wall mounting; 216 kg floor mounting
Mounting options	Wall (standard) or floor (with optional floor base)



## *radiology ahead*

### Competence in x-ray systems

Villa Sistemi Medicali is one of the most important manufacturers of radiological systems worldwide. Leveraging more than 50 years of experience in X-ray field, the company's know-how covers all technologies which can create a modern radiographic examination room.

### A wide range of equipment

Our range of products includes:

- Digital X-Ray systems
- Remote controlled tables
- Classical tilting tables
- General rad rooms
- Mobile units
- Surgical C arms
- Mammography
- 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 defined by our qualified personnel and adapted to the needs of our customers.

### Logistic services: a global presence

Villa Sistemi Medicali daily provides full systems, spare parts, accessories and consumables, shipped regularly to all our customers, worldwide, using the most efficient couriers. Shipment modalities include ground, ship, air and inter-modal freight transport.



ISO 9001:2008



ISO 13485:2003

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