

rotograph evo

Dental Panoramic Systems



radiology ahead

rotograph evo

modern technology
and innovative design



From the user point of view, the Rotograph Evo represents a reliable and inexhaustible co-worker, able to provide the essential support for a correct diagnosis of patients diseases. Our distributors, on the other hand, consider the capacity of the Rotograph Evo to fulfill the requests and the expectations of the market the ***real winning component of this product***: gradually new versions and functions were added to the system and nowadays the Rotograph Evo is one of the few examples of X-ray panoramic platform, with a unique mechanical structure designed for ***analog panoramic, digital*** and ***3D Cone Beam***.

The secret of this great achievement is the project's ability to "grow up" according to the market needs. Since we are committed to incessantly improve our products, we are now able to offer a further improved machine, with an innovative digital platform for ***enhanced image quality*** and a new touch screen user interface, easier to be used.

innovative design



our technology for a precise diagnosis



Constant magnification factor for an accurate diagnosis



High frequency generator assures an efficient X-ray emission



Wide range of projections covering all diagnostic needs



3D upgradeable for maximum investment protection



Multi-motorized rotation allowing different projections



Hi-resolution sensor for high definition images

Evolution comes from experience

Rotograph Evo takes to the next level the experience of five decades of dedication to X-ray diagnostic imaging. Since the very first model introduced in 1974, the Rotograph name has always been synonymous with panoramic radiography.

As your patients rely on you for dental treatment, you can trust Rotograph Evo for an accurate diagnosis. Based on a **multi motor technology**, Rotograph Evo has all the examination programs you need and easily adapts to the individual characteristics of each patient. Panoramic images are acquired with **constant magnification factor**, resulting into an accurate geometrical representation of anatomic structures.

The power of digital

The digital version of Rotograph Evo allows to fully benefit from this specific technology. Images can be displayed and shown to the patient in seconds and become an important tool to explain **treatment planning** and progress.

The "core" of Rotograph Evo D is the high resolution **digital detector** with CsI technology that, thanks to its high sensitivity, permits a reduced X-ray dose. Rotograph Evo D is compliant to existing regulations on patient dose monitoring; the dose readout is calculated for each exposure and stored with the image without the need for add-on DAP measuring devices.

All the softwares provided with Rotograph Evo D are conceived for **sophisticated treatments** and for accurate contrast control of the images. Patient archive and image database are extremely powerful and can be integrated with practice management softwares. Optional DICOM functionalities can also be added for integration into hospital networks.

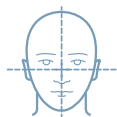


precise



diagnosis

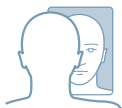
the key for a high quality image



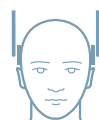
2 laser beams for a simplified patient positioning



Electronic focal layer adjustment without patient repositioning



Alignment by mirror for patient self-centering possibility



Three-point headrest for maximized patient stability



Complete range of chin rests to accommodate all patients for all exams



Telescopic motorized column for a fast positioning

Accurate alignment, minimum effort

A good patient alignment to the reference axis is the most important factor for a good panoramic image. On Rotograph Evo, **two laser beams** are used for proper centering of mid-sagittal and Frankfurt planes, without the need for a third positioning light, normally required by competitors. The result is a faster positioning, with consequent advantages for patient's **comfort** and **speed** of operating.

The focal layer adjustment is obtained simply indicating the patient's morphology: patients with different jaw structures are not a problem, as this function allows to compensate differences in the anterior region. The focal layer is electronically adjusted, without repositioning the patient.

The **self-centering** possibility is also fundamental: thanks to the mirror installed on the machine, the patient can see him/herself reflected and helps to self-center the mid-sagittal plane, resulting in faster positioning. Finally, a complete range of chin rests are supplied with the unit, to accommodate all patients for any applications.



Standard chin rest with bite stick: provides stable chin support and accurate location of the incisors in the focal layer.



Edentulous chin rest: provides a reference position for the patient chin when use of bite stick is not possible.



Reduced chin rest: support specifically developed for the execution of Sinus exams.



Implant positioner: provided with numerical references, it permits to avoid dental impression.



Stable positioning

The patient support structure makes use of **multiple contact points** to ensure correct patient alignment and stability during the exam.

- Three-point headrest provides centering of mid-sagittal and Frankfurt planes
- Chin rest and bite stick provide stability and proper localization of the focal layer
- Angulated hand grips provide for a natural extension of the cervical vertebrae to reduce image shadows in the incisor area

image.

quality

an advanced system for immediate use



*Touch screen interface
for an easy use
of the unit*



*USB connection
to save images on
external device*



*Automatic setup
of collimator
according to each exam*



*High speed/
definition mode
for Ceph examination*



*Single or dual Ceph
detector to protect the
investment over time*



*Dicom functions
for integration into
hospital networks*

Simple is beautiful

Even the most advanced machine may not represent an asset if it is complex to handle; for this reason, Rotograph Evo makes its technology easy to manage for the operators, thanks to the **intuitive user interface, touch-screen** on the digital versions of the system.

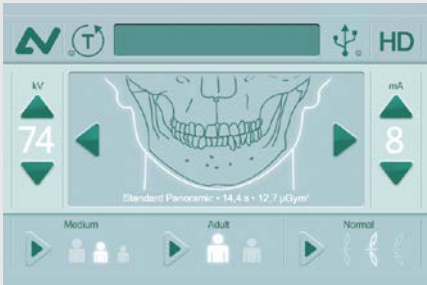
In line with our ergonomics criteria, the commands have easy-to-find buttons, with controls grouped in logical areas consistent with the typical operating workflow: patient selection, exam protocol, exposure adjustments.

An easy-to-use machine is a direct consequence of an efficient installation, with a perfect integration into the practice network, in case of digital systems.

Rotograph Evo is easily deployed into your environment: the **integrated Ethernet connection** is compatible with existing networks and requires no dedicated boards to be installed in the computer. This makes possible to acquire images from any PC, including notebooks. DICOM functionalities can also be added for integration into hospital networks.



advanced



Maximum speed

With its practical operability and appealing design, the **touch screen user interface** makes every function accessible with few touches.

Icons, numbers and symbols are positioned in order to allow an immediate use, with very little effort for the operator. Moreover, the generous dimensions of the screen assure the best visibility in all conditions.

Maximum efficiency

In addition to the standard control panel installed on the side of the unit, the Rotograph Evo D provides also a **virtual keyboard**, conceived for those who prefer to control the unit through the system's software.

This program can be visualized on the connected workstation and presents the same functions of the main keyboard.

Maximum reliability

The benefits of digital systems are undeniable, but it is also essential to preserve important diagnostic sessions from accidental network failures.

The Rotograph Evo D offers the possibility to save images on a common **USB memory stick**, so the user can operate in total safety even in case of network damage, protecting the workflow from any consequences.

& simple

basic projections

Villa Sistemi Medicali integrates, even on the standard version of the Rotograph Evo D, **every kind of projection** needed in general dentistry. Therefore the operator can count on 5 standard projections, including 3 PAN exams, the Sinus and the TMJ.

We assigned particular relevance to the traditional panoramic image, due to the importance that this exam historically has for dentists and radiologists.



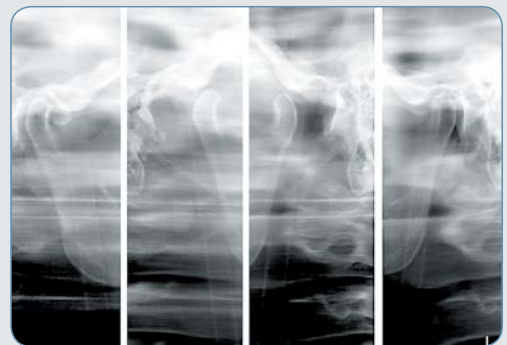
Standard Panoramic: traditional projection that assures a complete visibility of mandible, maxilla, sinus, TMJ and the supporting structures.



Maxillary Sinus: the exposed area is moved towards the sinusal area and the apices of maxillary teeth.



Pediatric Panoramic: projection optimized for the children anatomical structures. The magnification factor remains unvaried.



TMJ-Temporomandibular Joints: with open and closed mouth. The true Lateral view shows the exact location of the condyle.



Evo Panoramic: advanced trajectory exam conceived for the digital version. The rotation enhances the focal layer in the frontal area, minimizing the mispositioning effects.

advanced projections

The Rotograph Evo can be integrated with optional exams packages, created to widen the spectrum of the diagnostic applications of the unit. The "**eXtended Package**" Evo XP offers a range of additional projections, including Panoramic sections, frontal dentition and low dose pan; particular dedication is then reserved to the orthogonal dentition and, on the digital version of the unit, to the bite-wing projections.

The optional **Implant package** for the Rotograph Evo D is useful to take transversal sections of the dental arch for the preliminary analysis of the implant sites and the related follow-up.



Orthogonal projection: reduced overlapping of adjacent teeth for improved detection of interproximal caries.



Frontal dentition: the exposure focuses on the frontal part of the arches, with optimized focal layer.



Bite-wing: set of projections displaying the single bite-wing of one arch or both, in the same image.



Half Panoramic, left and right: provides reduced exposure when the diagnostic target is in one or the other half of the jaw.



Implant: displaying transversal sections of the arches for implant planning, follow-up, impacted teeth analysis.

cephalometric projections

Every version of the Rotograph Evo can be conveniently integrated with a **cephalometric arm**. The cephalostat provides fast and gentle patient alignment for lateral, frontal and antero-posterior projections. Depending on the exam type and patient size, several image areas can be chosen, from 18x22 to 22x30cm.

Two scanning modes can be selected:

- high resolution mode delivers highly detailed images
- high speed mode reduces acquisition time up to 4,5 seconds for a standard lateral ceph and is especially suitable for children.



Lateral Ceph: it permits excellent visibility of the patient profile. On Rotograph Evo D, for lateral projections a copper filter is automatically inserted into the x-ray beam to enhance the visibility of the patient's profile and a calibrated ruler is superimposed on the image for proper geometric calibration.



Antero-posterior Ceph: executable with different image formats, provides a frontal view of the patient, useful to recognize asymmetries.



Carpus: bone age can be assessed with the dedicated Carpus Exam. A specific hand support plate makes positioning fast and easy.

single or dual detector: it's your choice

The Rotograph Evo D is available as a *single* or *dual Ceph detector configuration*. If you're doing just a few studies per week, or are bound to a limited budget, the single detector unit is your choice: the same digital sensor can be moved from the Pan to the Ceph position with a quick and simple operation. The ergonomic hand-held assures a solid and stable grab during the preparation and the repositioning of the sensor.

If orthodontics is your field of expertise, or you just want to switch from Pan to Ceph instantly, then a dual sensor unit is what you need. This particular unit includes two different detectors, ready for use. If you prefer to postpone your investment on a Ceph arm, Pan units can be always updated to cephalometry, with single or dual detector. Predisposed digital pan units can be factory-set for upgrade to ceph with several upgrade options, to help *you plan your budget* according to your needs, protecting your investment over time.

single or dual



a complete family of units for all needs



Rotograph Evo

The *analog version* of Rotograph Evo accepts all standard 15x30cm flat cassettes. If your practice is equipped with CR phosphor plate not compatible with 15x30 format, you can request a specific cassette holder for using 24x30cm cassettes for panoramic images.

The optional ceph arm can be installed at any time and can be selected to host film or CR cassettes with 18x24 cm or 24x30cm or 8"x10" format.

Rotograph Evo D

The *digital version* of the Rotograph Evo combines the winning features of the analog unit with the known advantages of digitalization: usability, safety and minimization of the operating costs.

Moreover, the combination between the multi-motorized rotation and the high definition digital sensor assures excellent quality radiographic images. The touch screen control panel and the USB memory stick contribute to make this machine easy to manage. Finally, the optional Ceph arm is available to be fully integrated into the unit.

Rotograph Evo 3D

At the top of Evo family of products there is a 3-in-1 unit: *Panoramic, Cephalometric and 3D*. The Rotograph Evo 3D employs the newest "Cone Beam" technology together with the innovative Flat Panel Detector (FPD) based on Amorphous Silicon with Caesium Iodide (CsI) scintillator.

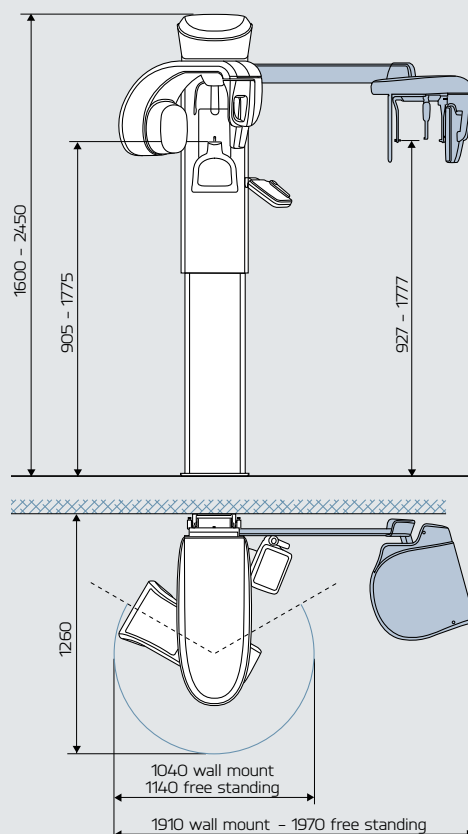
This unit permits to directly acquire Pan images and 3D volumes, with a standard Field of View (FOV) of 93x82 mm; the integration of a digital cephalometric arm is then available to complete the system's performance.

Rotograph Evo family Technical Parameters

Examination Programs

Standard programs	Adult Panoramic Child Panoramic Evo Panoramic Open-Closed mouth lateral TMJ P-A Sinus (rotational)
Evo XP package	Half Panoramic adult (l/r) Half Panoramic child (l/r) Orthogonal Projection Low Dose Panoramic Frontal Dentition Single bite-wing l/r (for digital version only) Dual bite-wing (for digital version only)
Implant package	Transversal sections of any dental component (for digital version only)
3D package	Dentition Volume Left TMJ Volume Right TMJ Volume Sinus Volume

Dimensions



Technical Data

	Rotograph Evo Analogic	Rotograph Evo D Digital 2D	Rotograph Evo 3D Digital 3D
Generator	High frequency, 200 kHz constant potential	High frequency, 200 kHz constant potential	High frequency, 200 kHz constant potential
High voltage	60 – 86 kV	60 – 86 kV	60 – 86 kV
Anodic current	6 – 12 mA	6 – 12 mA	6 – 12 mA
Focal spot	0.5 (EN 60336)	0.5 (EN 60336)	0.5 (EN 60336)
Vertebral column compensation	Auto kV modulation	Auto kV modulation	Auto kV modulation
Weight	PAN 147 kg CEPH 167 kg	PAN 147 kg CEPH 167 kg	PAN+3D 161 kg CEPH 186 kg
Power supply voltage	110-120 V / 220-240 V (±10%) monophase, 50/60 Hz	110-120 V / 220-240 V (±10%) monophase, 50/60 Hz	110-120 V / 220-240 V (±10%) monophase, 50/60 Hz
Dose area product (DAP)	Standard	Standard	Standard
Standard image transfer	N/A	Ethernet	Giga-Ethernet
Sensor technology	N/A	CCD w/ Caesium iodide (CsI) scintillator screen Pixel size 27 µm	Flat Panel amorphous Silicon w/Cae- sium iodide scintillator screen (PAN+3D) Pixel size 127 µm



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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