EN

NEWTOM
VG-One

BEYOND VISION

NEWTOM
CONE BEAM 3D IMAGING

NEWTOM VG-One

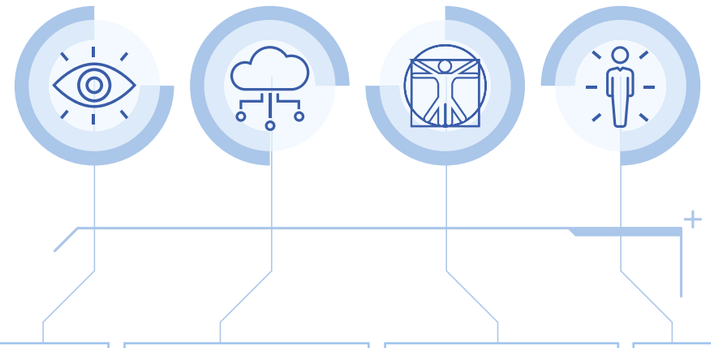
Complete.Vision
Advanced clinical technology

FROM NEWTOM'S ONGOING RESEARCH, THE BEST IMAGING PERFORMANCE

NEWTOM VG-One is the latest outcome of the endless evolution of NEWTOM technology in 2D and 3D imaging. Top quality for a wide variety of diagnostic needs.

NEWTOM VG-One

- The clinical performance of NEWTOM VG-One, combining extreme compactness and versatility, makes it a technologically complete and cutting-edge dental radiology device.
- Reliability, safety and patient health are guaranteed thanks to systems that adjust the emitted dose according to the anatomical area scanned - which results in consistently clear and sharp images.
- The new Neowise software is a technologically advanced platform for managing, processing, checking and sharing all diagnostic images as required.



MULTI-DIAGNOSTICS
A wide range of functions and tools for multiple clinical needs.

ADVANCED SOFTWARE
A powerful and intuitive platform ensuring an optimal workflow.

ERGONOMICS
Functional design, making work easier for the operator while ensuring patient comfort.

PATIENT HEALTH
Detailed and comprehensive images with always well calibrated and safe radiation doses.

3D PANEL FOR PANORAMIC EXAMINATIONS

In the available NEWTOM VG-One models, the 3D panel can be used to its maximum degree of versatility to also perform 2D panoramic examinations.

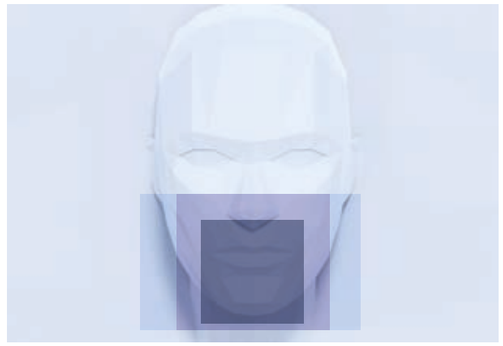
CUTTING-EDGE 3D

Bring all the benefits of 3D imaging to your dental practice, for guaranteed results with maximised patient protection.

A wide choice of FOVs ensures three-dimensional X-ray imaging of different anatomical areas, including very large ones, by only irradiating the parts of clinical interest. Different protocols are used to adapt the radiation dose to the type of examination and the patient's characteristics. Several filters and automatic functions are available to help optimise the image quality, improving sharpness and removing artifacts or flaws.

DIAGNOSTIC REQUIREMENT	AVAILABLE FOVS
Sectoral scanning of complete or partial dentition, individual lower and/or upper arch scanning, maxillary sinus floor included or part of the TMJ	6x6, 8x6, 8x8, 10x10, 11x6, 11x8, 11x11, 15x11 (double scan)
Imaging of the maxillary sinus region, including nose and a portion of the zygomatic district or maxillary sinus district	8x8, 10x10, 11x8, 11x11
Imaging of both condyles, of a single condyle with the fossa and of the temporomandibular joint including the sinus	10x10, 11x6, 11x11 (singol scan) 13x6*, 13x10*, 15x6*, 15x11* (double scan)
Capturing of dentition models, aligners or surgical guides	8x8, 10x10, 11x6, 11x8, 11x11

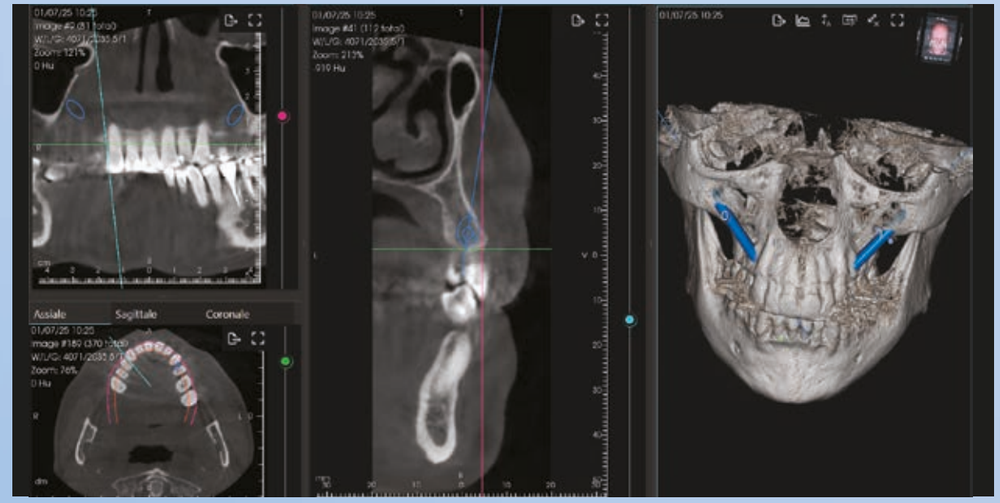
(*) Specific examinations of the temporomandibular joint (may not include the entire dentition).

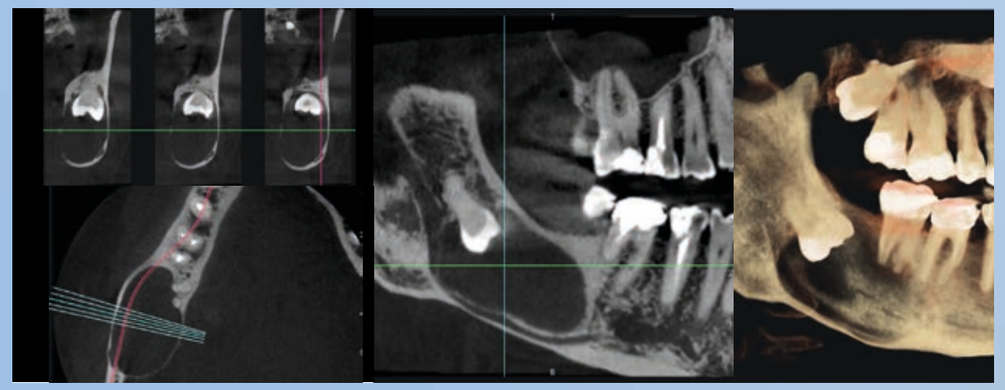


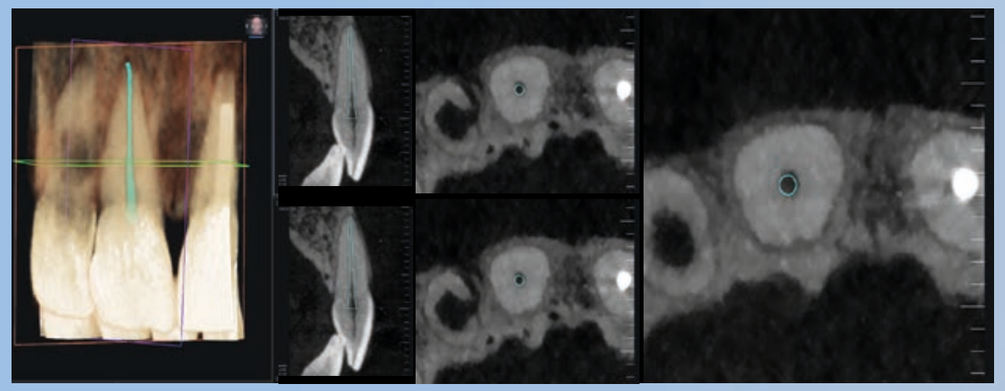
AFOV FEATURES

The field of view adapts to the patient's morphology and the working diagnosis; sectoral scanning is performed by confining irradiation to the area of interest only.

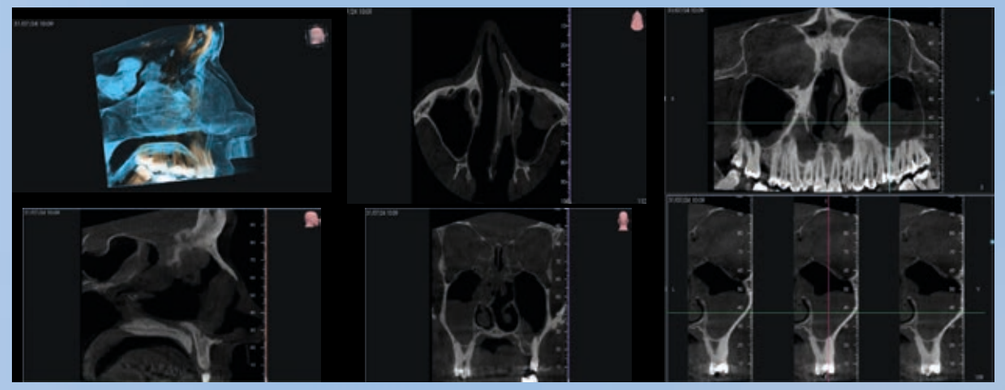
3D dental exams

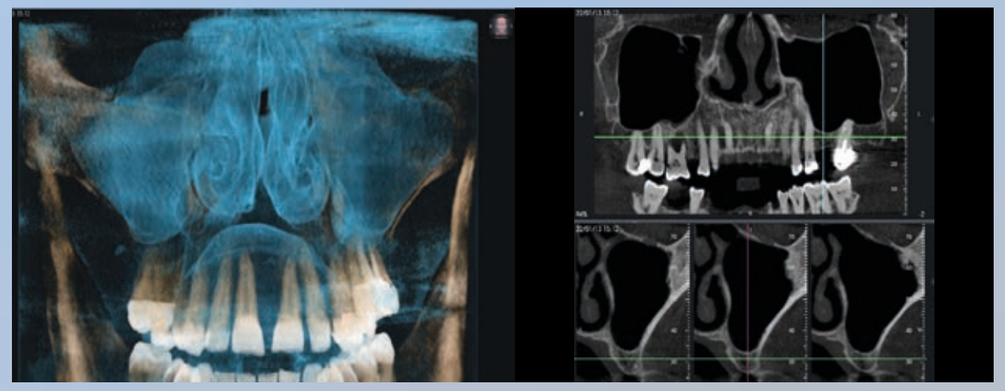


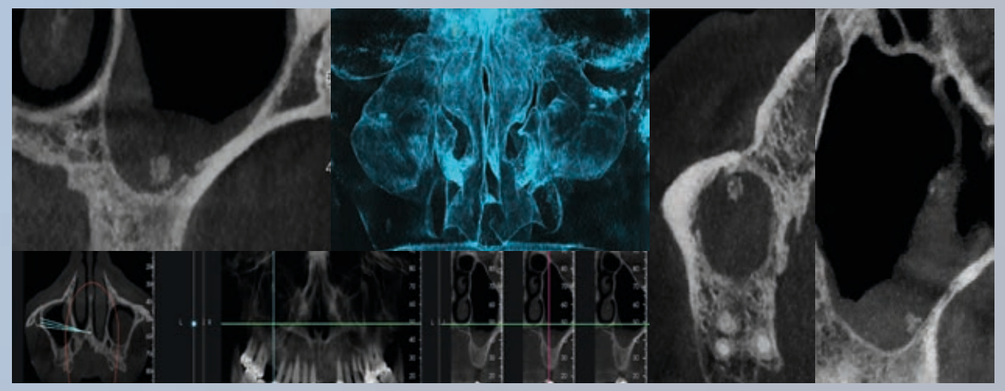




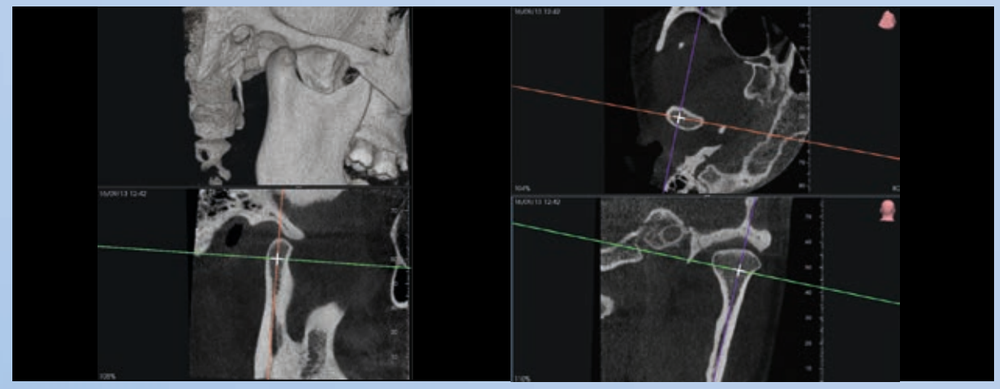
3D sinus exams

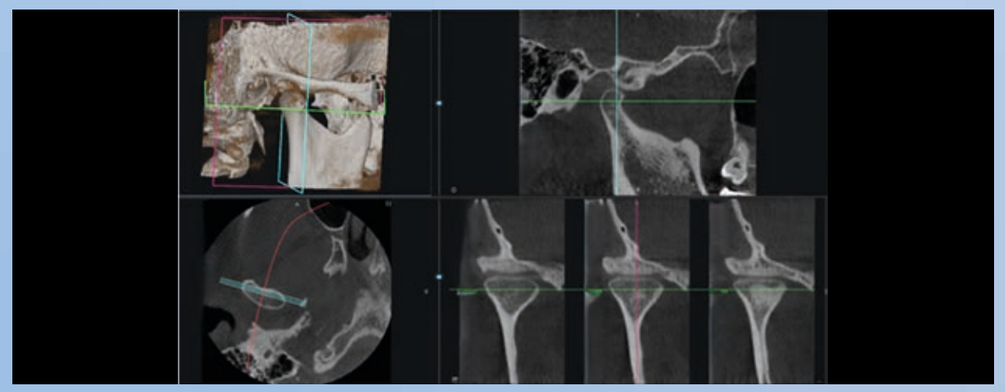


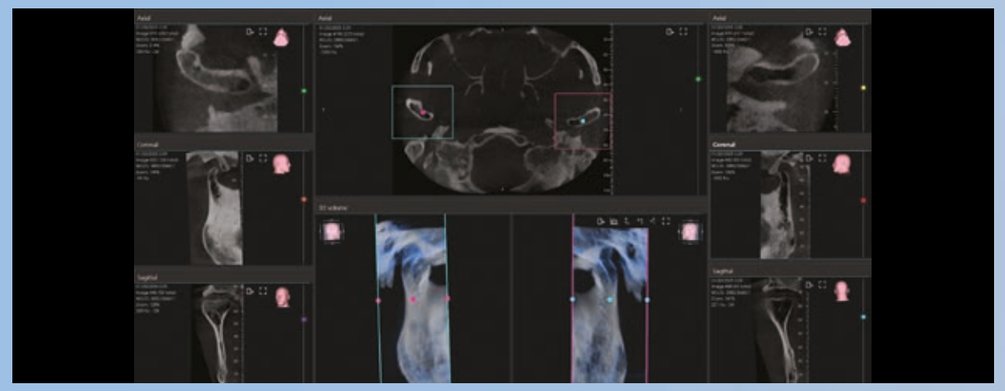




3D TMJ Exams





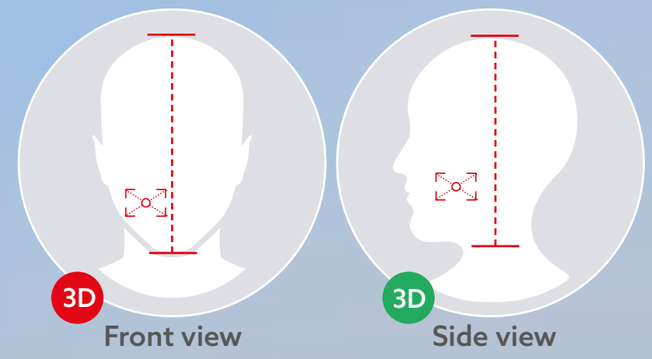


OPTIMISED 3D SCANNING PROTOCOLS

Each FOV can adapt to any clinical needs thanks to a choice of three different protocols: very low for surgical follow-ups, standard for treatment planning, very high levels of detail for micro-structure analysis.

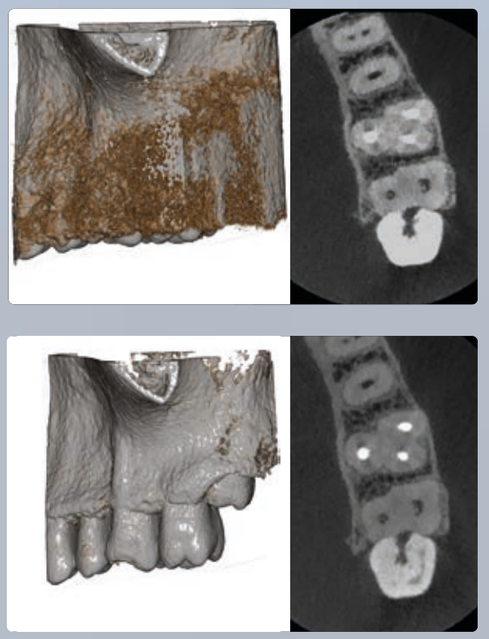
SCOUT VIEW SYSTEM

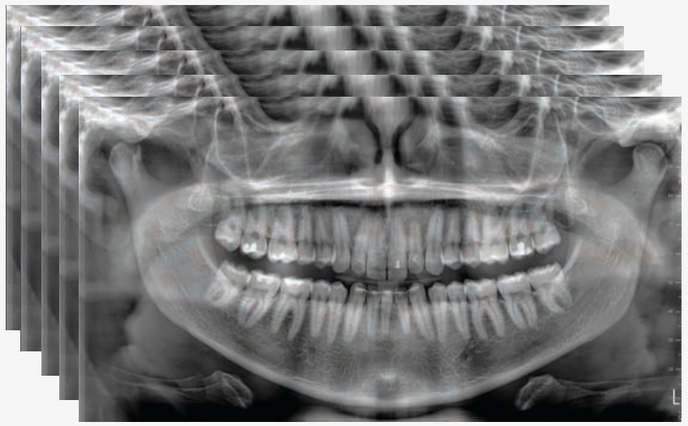
It allows two images (lateral and frontal) of the patient to be obtained with minimal exposure. The doctor can then modify the 3D scanning area through precision servo-assisted movements of the machine controlled from their workstation, thus avoiding the risk of having to repeat the exam.



AMAR (AUTOADAPTIVE METAL ARTIFACT REDUCTION) FILTERS

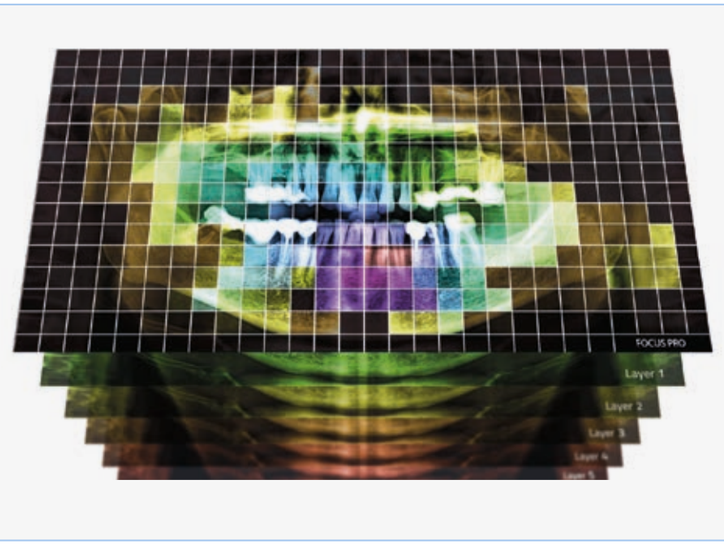
They can recognise metal elements and, through special software, generate an additional set of images in which artifacts are minimised. Very useful for planning specialist treatments that require segmentation of anatomical structures.





MULTIPAN

In a single scan and a dose equal to that required by a traditional panoramic image, 5 different focus layers can be obtained offering the best diagnostic detail, even where anatomies are complex.



FOCUS PRO

It allows users to obtain, automatically and for standard panoramic imaging, a single image by merging the 5 layers generated by the MultiPAN function and selecting the most in-focus portions of each of them.

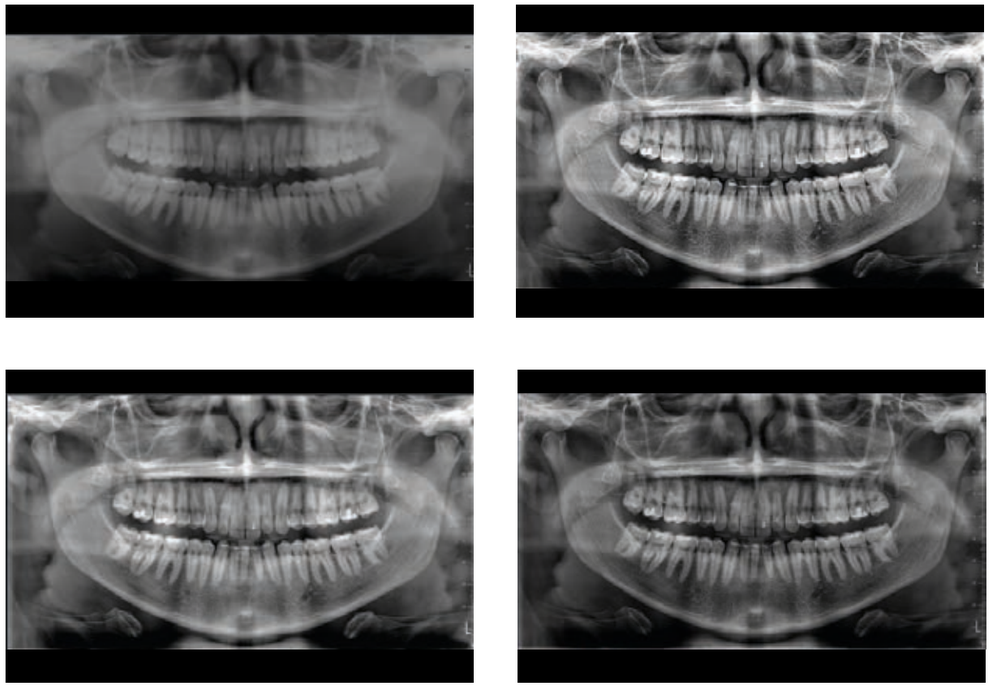
CLINICAL APPLICATIONS OF THE LATEST TECHNOLOGY

The state of the art of 2D X-ray imaging by NEWTOM.

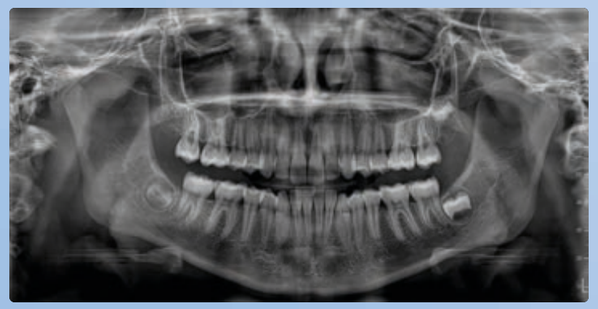
NEWTOM VG-One performs panoramic exams, TMJ, maxillary sinuses, dentition, and bitewing. The diagnostic details of the obtained images are further enhanced through the application of filters and features that can be easily adjusted via software.

APT (Autoadaptive Picture Treatments) filters of the aPAN (adaptive PAN) feature

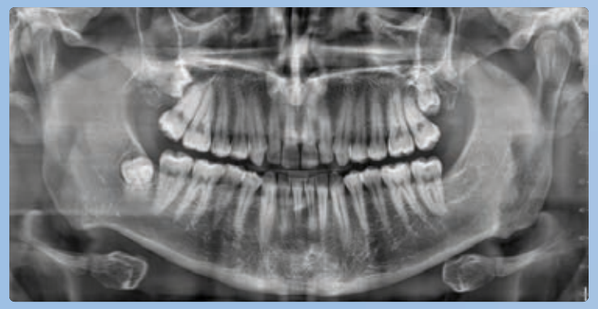
Self-adaptive filters that adjust the sharpness and detail of the different anatomical areas viewed, automatically optimising each layer captured via the MultiPAN function, according to settings predefined by the operator.



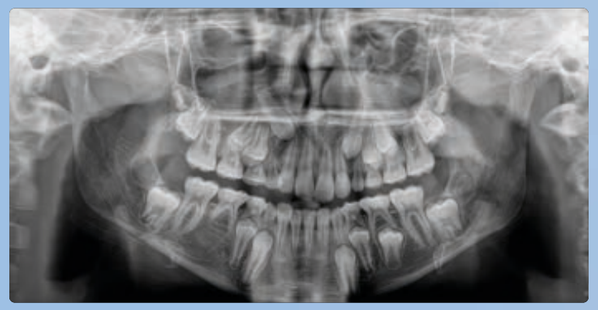
SCAN	
STANDARD PANORAMIC	Allows dental arches,maxillary sinuses and the temporo-mandibular joints to be viewed completely and accurately.
ORTHOGONAL PANORAMIC	Compared to a standard panoramic image, this highlights interproximal spaces perfectly and the entire root structure is free from any overlapping.
PAEDIATRIC PANORAMIC	The FOV and exposure are adapted to the build of paediatric patients.



Standard Panoramic

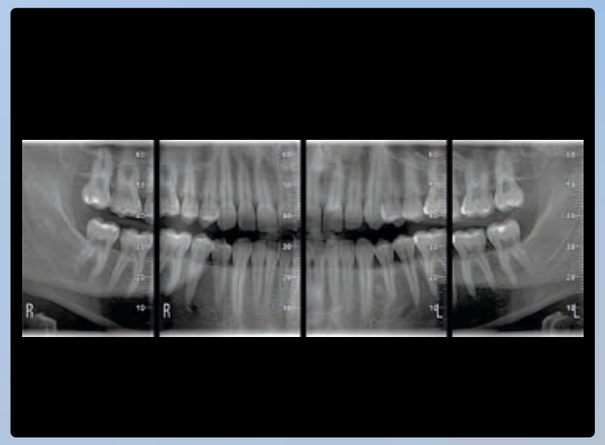


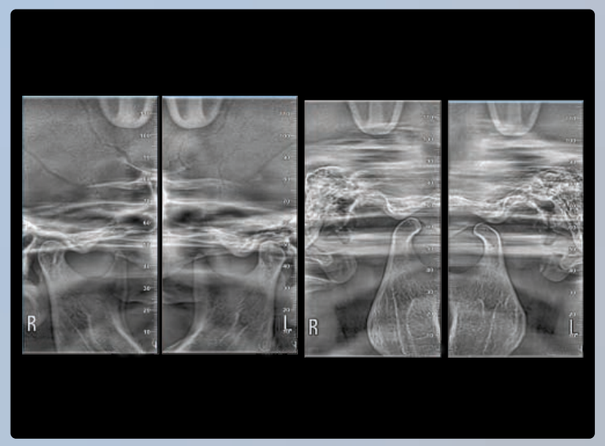
Orthogonal panoramic



Paediatric panoramic

SCAN	
DENTITION	Provides clear, detailed images that are limited to the dentition area, in whole or in part: their orthogonality and definition are perfect for periodontal assessments.
BITEWING	Optimised collimated interproximal projection with a low dose to investigate dental crowns. An alternative to intraoral bitewings, with a less invasive and more comfortable procedure.
MAXILLARY SINUSES (FRONTAL AND LATERAL)	Creates an image that allows dentists to assess the health of the maxillary sinuses. To be effected with dedicated sub-nasal support.
TEMPOROMANDIBULAR JOINT (FRONTAL/LATERAL)	Generates lateral and postero-anterior projections, with mouth open or closed. To be effected with dedicated sub-nasal support.





CEPH SCANS AND FEATURES

Complete your dental practice's offering by adding cephalometric examinations.

The teleradiographic arm is designed for cephalometric as well as carpal imaging; additionally, thanks to the modular design of NEWTOM VG-One, it can be positioned either on the right or on the left of the machine or even retrofitted – in CEPH Ready configurations – at a later stage.

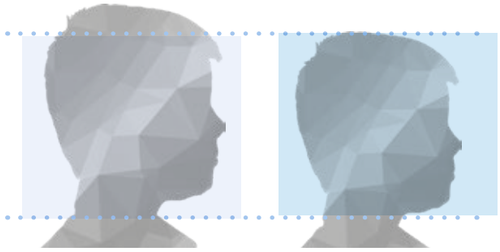
The patient experience comfort is enhanced by the head support equipped with a height-adjustable forehead support and side rods available in two sizes, standard for adults and long for children, both complete with soft ear protectors.

REPOSITIONABLE 2D PAN-CEPH SENSOR

Some designs allow for both panoramic and cephalometric imaging using the same 2D sensor. The 2D PAN-CEPH sensor is designed to be easily relocated to the different positions used for performing two-dimensional scans

TOP CEPH POSITIONING

TOP CEPH positioning for children reduces thyroid exposure and prevents sensor-shoulder contact, allowing inclusion, when possible, of the skullcap.

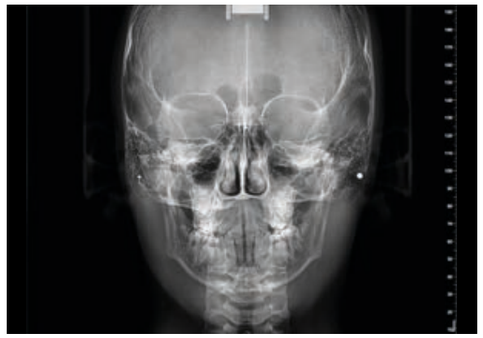


LATERAL SKULL TELERADIOGRAPHY (LL)

It allows highly detailed images of bone structures and soft tissues, providing essential data for cephalometric studies.

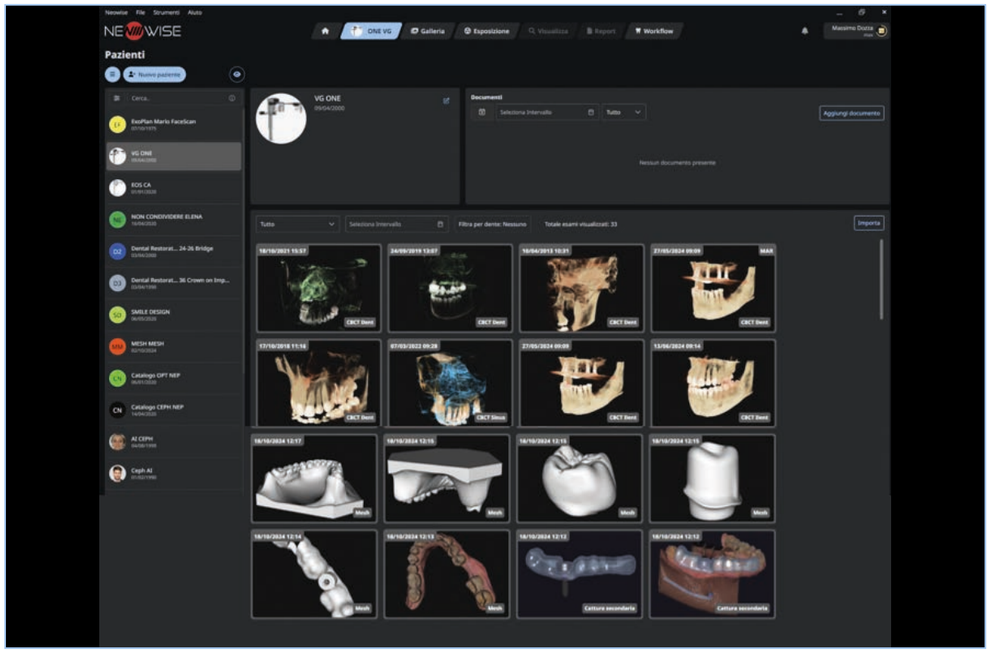
FRONTAL SKULL TELERADIOGRAPHY (AP-PA)

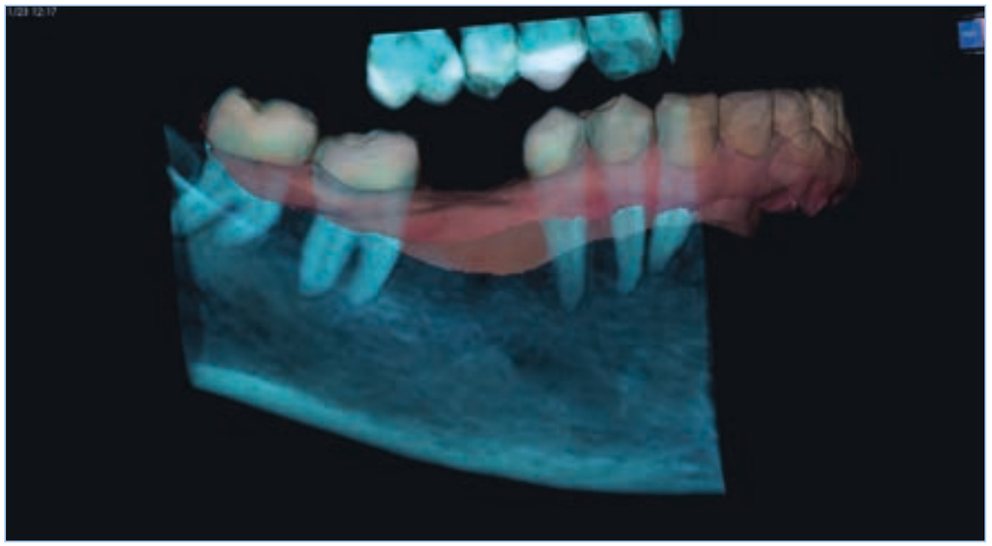
Through frontal projections it helps investigate the presence of possible asymmetries and malocclusions for optimal completion of the required patient treatment.



CARPAL TELERADIOGRAPHY

In paediatric patients, its main purpose is evaluating the residual bone growth potential to better predict the development of maxillary and mandibular bones. Scanning can be performed with a dedicated support.





IMPROVE CLINICAL EFFICIENCY BY OPTIMISING YOUR WORKFLOW

NEWISE

01

User profiling

Customise permissions and functions according to the role and preferences of the various users in your practice.

Data import

Automatically import examinations and images from NNT and other main dental imaging software tools.

02

Neowise
Software

Treatment sharing

Create personalised reports on the patient's health and illustrate the treatment plan clearly.

06

03

Database management

Create patient records with the utmost ease and security to ensure clear, accessible consultation at all times.

Device configuration

View and configure all devices registered and enabled on your workstation according to your needs.

05

Image processing

Maximise user experience thanks to a user-friendly tools menu and a range of views designed to match clinical needs.

04

ARTIFICIAL INTELLIGENCE

THE NEXT-GENERATION DIGITAL ASSISTANT

Neowise imaging software is designed around you and your patients. It allows you to manage/process 2D and 3D images for accurate diagnoses and streamlined communication with the patient. Simple and effective, with advanced diagnostic/planning tools and filters.

Optimised workflow
Automating processes such as image segmentation and classification will cut operating time, making your practice more efficient.

Smooth dentist-patient communication
Advanced diagnostic tools make it easier to explain treatment plans to patients, improving their understanding and their level of engagement.

User-friendly interface
Designed to improve the user experience and reduce learning times. Using a whole range of different features has never been easier or more personalised.

Multi-image support
The software lets you view and compare 2D and 3D images simultaneously, making it easier to compare clinical information and improve diagnostic capacity.

Real-time 3D rendering
Advanced rendering algorithms allow real-time display and management of 3D images for consistently detailed diagnoses.

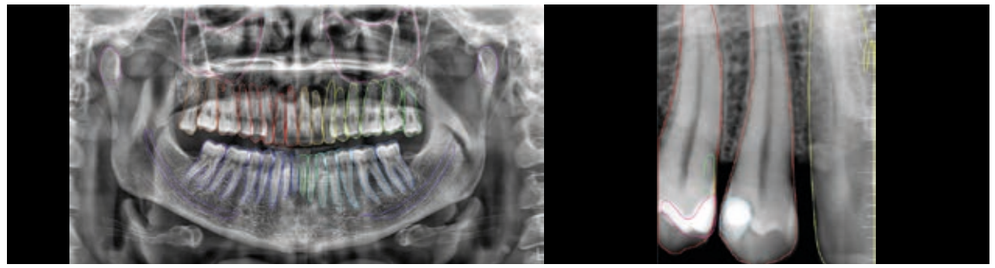
Simulation of clinical analyses and treatments
This function can be used to view the expected outcomes of practices such as implant positioning; for example, it allows assessment of the insertion angle and can predict aesthetic results with dental crowns.

Centralised image management
The software accesses all patient scans quickly via a single interface to simplify consultation and streamline cooperation between teams from different departments.

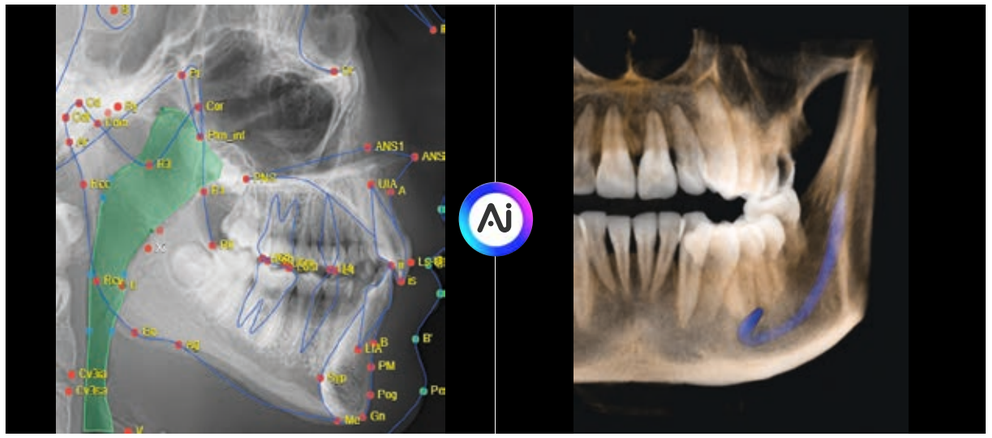
Guaranteed compatibility
Key communication protocols such as DICOM, RIS/PACS and TWAIN are supported, ensuring secure transmission and storage of medical images.

INNOVATIVE CLINICAL SOLUTIONS

Neowise integrates automated AI-powered features that improve diagnoses, raise operational efficiency and make treatment more personalised for each patient, making your work more precise and finely targeted than ever.



Detection of panoramic curves on CBCT exams
Identification of inferior alveolar nerve in volumetric exams
Classification of 2D and 3D photographic images
Anatomical and pathological analysis for 2D intraoral and panoramic exams
Segmentation of 3D anatomical structures
Identification of airways to diagnose OSAS conditions
Alignment of latero-lateral teleradiography with photo of patient
Alignment and combination of CBCT exams with optical impressions
Detection of cephalometric points and creation of tracings
Smile Design module to simulate aesthetic treatments in frontal sectors

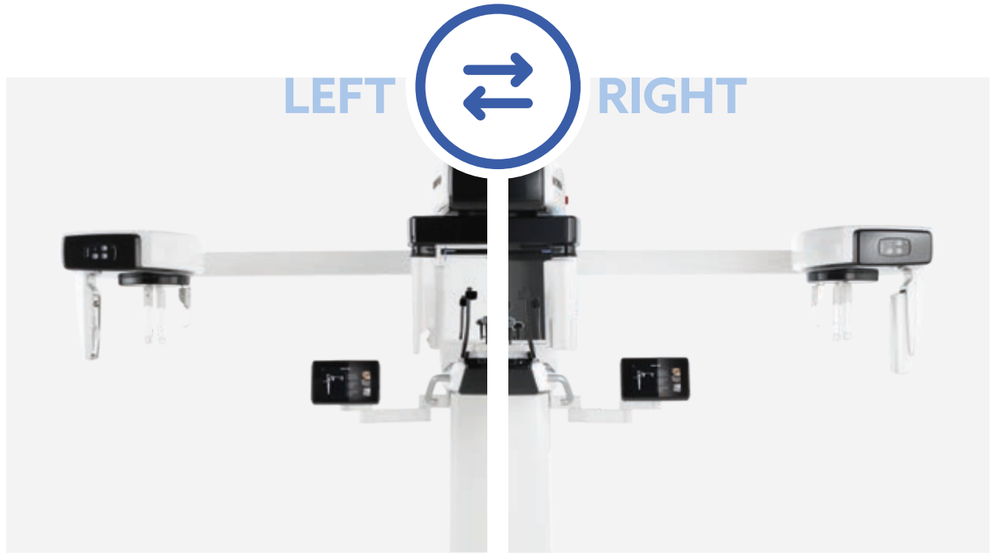


MAXIMUM ADAPTABILITY AND CONFIGURABILITY

Different configurations to facilitate installation and integration into your practice.

NEWTOM VG-One stands out for its amazing installation flexibility, making it highly adaptable to the available installation space and usage preferences. The main machine components, e.g. the 7" control panel or the touch sensitive keyboards, can be configured to be either on the right or left of the device.

Depending on different diagnostic needs, the machine can be configured to support 2D panoramic but also volumetric imaging, with different 3D fields of view available.

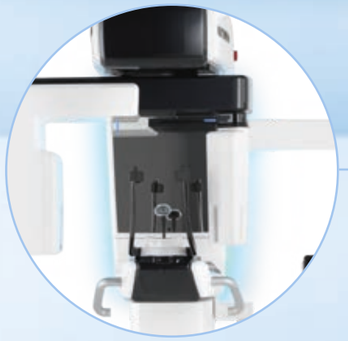


SMART MIRROR

Thanks to its 5 different colours, it provides clear, immediate information on device status at all times during treatment for both the operator and the patient.

COOLING SYSTEM

It allows high quality and accuracy of 2D and 3D images to be guaranteed even during continuous use, maximising performance and minimising the risk of possible machine downtime.



COMFORT LIGHTING

Customisable with different colours and intensity levels, it creates the right atmosphere to help patient relaxation during all positioning and scanning phases.

SCAN INFOGRAPHIC

To ensure precise 2D, 3D and CEPH imaging diagnostics, the icons provide essential visual support for optimal positioning of the horizontal laser according to the scan type.

OPTIMISED ERGONOMICS AND SAFETY

Ideal workflow and constant focus on patient health.

NEWTOM VG-One is provided with tools that facilitate correct patient positioning and assist the operator throughout the examination phases, with both on-board and remote control options, allowing the operator to carry out all the required actions to obtain clear and error-free images.

In addition, a strong focus on patient health has always been a priority for NEWTOM, as demonstrated by the many features designed to only allow exposure to the right irradiation dose in every circumstance, for any diagnostic and clinical need.

FULL-TOUCH 7" ON-BOARD CONTROL PANEL

The full-touch 7" control panel allows all the positioning and capturing phases to be programmed easily and intuitively directly on the device, just a few steps away from the patient.

The new graphical interface provides precise indications on how to position the patient and which accessories to use depending on the selected 2D or 3D protocol, e.g. for maxillary sinus or TMJ examinations.

The highly compact control panel can be installed to the right or left of the device, positioned and tilted according to different patient and doctor requirements.

VIRTUAL CONTROL PANEL

It allows the operator to monitor all the examination phases on their PC, from the selection of the type of test to scan start, and to be given immediate access to all the device functions.

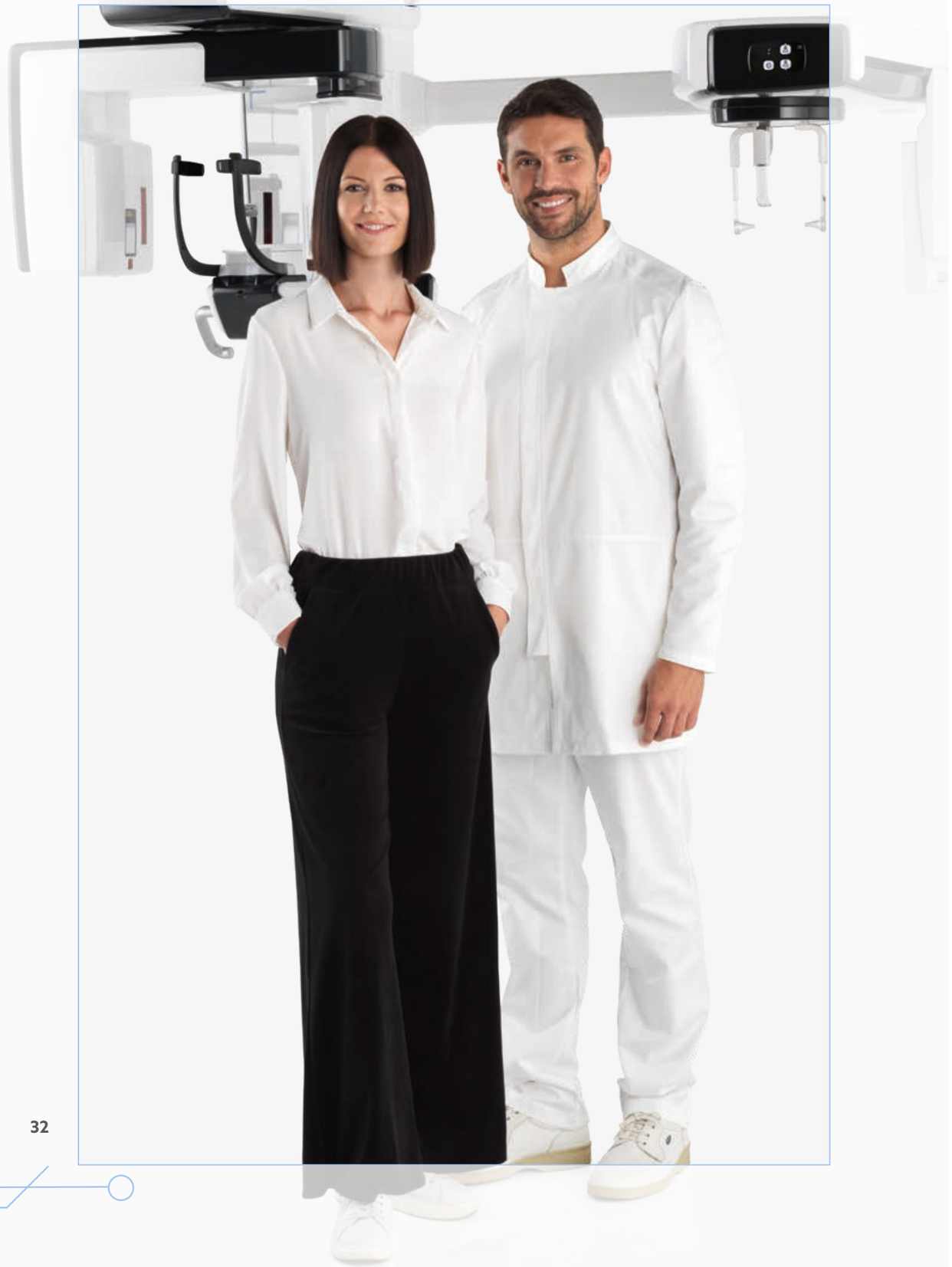
The interface is designed to guide the user through setting up and usage steps quickly and effectively.

MULTIMEDIA PACK REMOTE PATIENT MONITORING SYSTEM

Equipped with a front camera positioned to show the patient's face throughout the examination, ensuring correct positioning, as well as with an integrated microphone to allow remote communication.

"PATIENT FOOT POSITIONING" LASER SYSTEM

Correct positioning of the patient's feet is crucial to ensure scan accuracy and repeatability throughout the treatment. The system projects a laser beam on the floor that remains perfectly aligned even if the column is moved.



SAFEBEAM TECHNOLOGY

It lets users adapt the emitted radiation dose to the patient's anatomy, so that the X-ray dose is adjusted to the actual physical characteristics and build of the person being examined, avoiding unnecessary exposure levels and obtaining consistently clear images, without any need to manually enter exposure parameters.

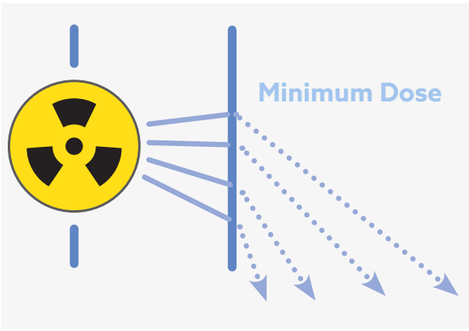
SafeBeam™

DOSESAVER TECHNOLOGY

Optimises patient doses for panoramic scans via two pre-settable working modes, "80" and "100", automatically adapting exposure thanks to the SafeBeam feature.

ECO PROTOCOLS

Available for both 2D and 3D scanning, they provide accurate images but with lower doses than in standard capturing. They are the ideal tool for post-operative monitoring and identification of any macro-structures (such as impacted teeth and agenesis) and, more generally, for all situations where the X-ray dose must be kept to a minimum.



IMAGES	2D	3D
Type	Pan (adult, child, ortho), QuickPAN, MultiPAN, Dent, Bitewing, Sin (front, L, R), ATM (front, lat, both), CEPH (LL, AP-PA, Carpus)	Dent, Sin, TMJ, Model Examinations limited to region of interest
(Maximum) theoretical resolution on the patient plane	PAN : 5.7 lp/mm (pixel 78 µm) BW : 6.6 lp/mm (pixel 77 µm) CEPH : 5.7 lp/mm (pixel 88 µm)	PAN : 5.1 lp/mm (pixel 77 µm) BW : 6.6 lp/mm (pixel 75 µm) CEPH : 5.7 lp/mm (pixel 88 µm) CBCT : 6.25 lp/mm (voxel 80 µm)
Fields of view on patient (adult and child) (L) x (H) in cm	PAN STD : 27x15.2 - PAN CHILD : 23.5x15.2 DENT (Full) : 26.48x15.2 BITEWING : 22.98X15.2 CEPH LL (full skull): 29.98x22.72	DENT : 6x6, 8x6, 8x8, 10x10, 11x6, 11x8, 11x11, 15x11 SIN : 8x8, 10x10, 11x8, 11x11 ATM : 10x10, 11x6, 11x11, 13x6*, 13x10*, 15x6*, 15x11* MODEL : 8x8, 10x10, 11x6, 11x8, 11x11
Scan time	PAN : 13.7 s (Ortho) ; 12.3 s (Standard) ; 6.8 s (Quick) ; 3.2 s (Sin R/L) CEPH LL : 9.9 s (Standard) 3.8 s (Quick)	Super HD : 16.8 s (Best Quality - single scan) Standard : 9.6 s (Regular - single scan) QuickScan : 6.4 s (Low Dose - single scan)
INSTALLATION		
Weight (kg)	2D basic machine: 51 Kg 3D basic machine: 56 Kg CEPH arm with sensor: 21 Kg	
X-RAY GENERATOR	**2D**	**3D**
Generator type	Constant potential DC	Constant potential DC
Anode voltage and current	2D : 60-90 kV (continuous emission); 4 – 15 mA	2D PAN: 70 kV (continuous emission); 4 – 15 mA 2D: 60-90 kV (continuous emission); 4 – 15 mA 3D: 90 kV (pulsed emission); 2 – 16 m
Focal spot	0,5 mm (IEC 60336)	0,6 mm (IEC 60336)
POWER SUPPLY	**2D**	**3D**
Voltage and frequency	115 – 240 V Single-phase - 50/60 Hz	115 – 240 V Single-phase - 50/60 Hz
Maximum current absorbed in working conditions	20 A at 115 V; 12 A at 240 V	20 A at 115 V; 12 A at 240 V
Current absorption in standby mode	1 A at 115 V; 0,5 A at 240 V	1 A at 115 V; 0,5 A at 240 V
Adjustment method	Automatic voltage/frequency adaptation	Automatic voltage/frequency adaptation
DETECTOR	**2D PAN & CEPH**	**3D/PAN**
Detector type	CMOS (CsI)	IGZO 3D
ERGONOMIA		
Patient positioning	Suggestion from virtual control panel - Servo-assisted alignment, 3 laser guides (Class 1 - IEC 60825-1) - 3D Scout View	

(*) Specific examinations of the temporomandibular joint (may not include the entire dentition).

CE 0051

NEWTOM
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NVGOGB1241S00 05/2025

BU MEDICAL EQUIPMENT

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