BEYOND VISION

NEWTOM
CONE BEAM 3D IMAGING

FOR A FUTURE-READY PRACTICE

The most complete direct-conversion hybrid CBCT, now featuring a new design: NEWTOM GiANO HR, redefined to harmonise with the entire NEWTOM imaging range, now offers even higher performance, delivering high-definition 2D and 3D images that capture even the finest detail.

NEWTOM GiANO HR FullView

○ Innovative technology and outstanding efficiency, packed into a powerful, versatile device. NEWTOM GiANO HR guarantees exceptional performance in every situation.

○ With low-dose protocols, SafeBeam™ technology and servo-assisted alignment, NEWTOM GiANO HR safeguards patient health with the utmost efficiency.

○ The 10" Full Touch control panel lets you use the Neowise software and set all the positioning and scan phases in a simple, user-friendly way directly on the device, just a few steps away from the patient.

MULTI-DIAGNOSTICS
Five FOV configurations for different diagnostic needs. ApT technology and teleradiographic function for high-contrast, finely detailed images.

ADVANCED SOFTWARE
Neowise is a technologically advanced platform for managing, processing, consulting and sharing all required diagnostic images.

3DPIC
Three-dimensional facial models can be superimposed on X-ray scans to provide a comprehensive overview and allow accurate treatment predictions.

3D PANEL
Ultra-high levels of detail for guided surgery, prosthetic design, endodontic studies and implantology.

INTELLIGENT LIGHTING

Customisable with different colours and intensity levels, this system creates an atmosphere that helps patients relax and indicates device status at every stage of positioning and scanning.

HIGH-RESOLUTION 3D PANEL

The latest NEWTOM 3D panel adopts a technology that seamlessly integrates with NEWTOM GiANO HR pre- and post-processing protocols, allowing users to capture even the smallest details, such as variations of dental roots, canal fractures, or bone anomalies. The thus-obtained 3D acquisitions ensure more precise diagnoses, optimal treatment planning and monitoring of clinical conditions, always with the utmost attention to patient health and well-being.

OPTIMISED 3D SCANNING PROTOCOLS

Each FOV can be adapted to meet any clinical need thanks to a choice of three protocols: ultra-low dose for surgical follow-ups, standard for treatment planning, very high levels of detail for micro-structure analysis.

ECO QUALITY

REGULAR QUALITY

BEST QUALITY

SCOUT VIEW SYSTEM

Allows two images (lateral and frontal) of the patient to be obtained with minimal exposure. Practitioners 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 scan.


3D Front view

3D Side view
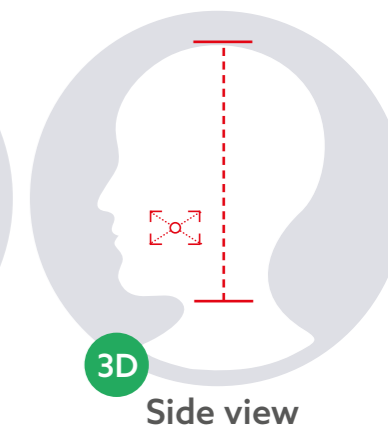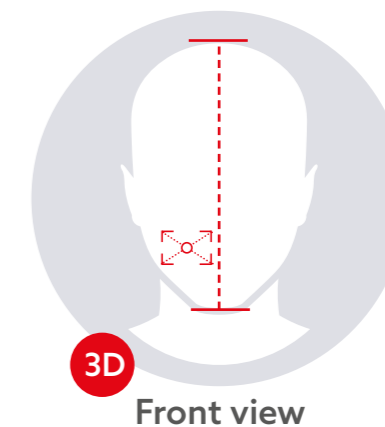
360° SCANNING TECHNOLOGY

360° scans and optimised algorithms always ensure the best outcome.

This image acquisition technique yields high quality images and considerably reduces artifacts, with short scan times.

360°

## AMAR (AUTOADAPTIVE METAL ARTIFACT REDUCTION) FILTERS

These can recognise metal elements and, via special software, generate an additional set of images in which artifacts are minimised. Highly useful for planning specialist treatments that require segmentation of anatomical structures.
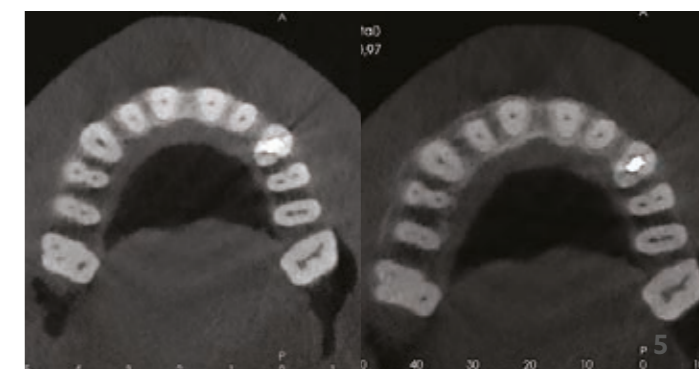
ESSENTIAL CONFIGURATION

NEWTOM GiANO HR comes, as standard, with a range of FOVs wide cover multiple treatment areas: endodontics, implantology, orthodontics and general dentistry.

• **FOV: 6x6; 8x6; 8x8; 10x6; 10x10; 11x8; 13x6; 13x10**
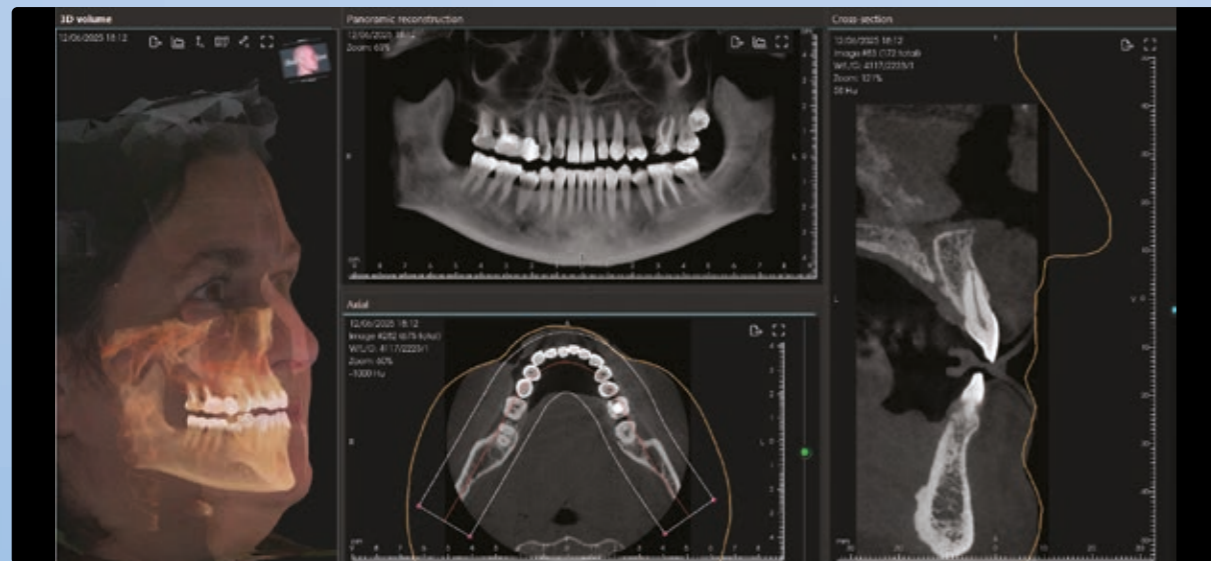
SUPERIOR CONFIGURATION

Together with the Essential configuration, the Superior FOV range extends the scope for treatment to the gnathology, otolaryngology and the maxillofacial field, including scans of both adult temporomandibular joints.
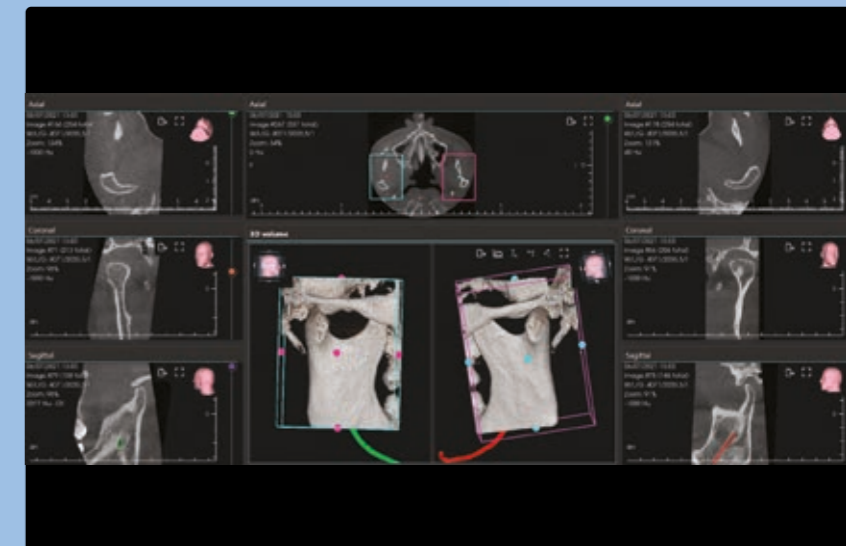
• **FOV: 13x16; 15x6; 15x10; 15x16**
• **FOV: 17x10; 17x14; 17x18**

TMJ PACK

For detailed, high-resolution diagnosis of both temporomandibular joints or bilateral examination of the ears and petrous bones. Optional pack that can be paired with the Essential configuration.

• **FOV: 15x6; 15x10**

CERVICAL & EAR PACK

For high-definition analysis of the inner ear and petrous bone, and any dysplastic, inflammatory or trauma-related pathologies affecting the cervical spine. Optional pack that can be paired with the Superior configuration.
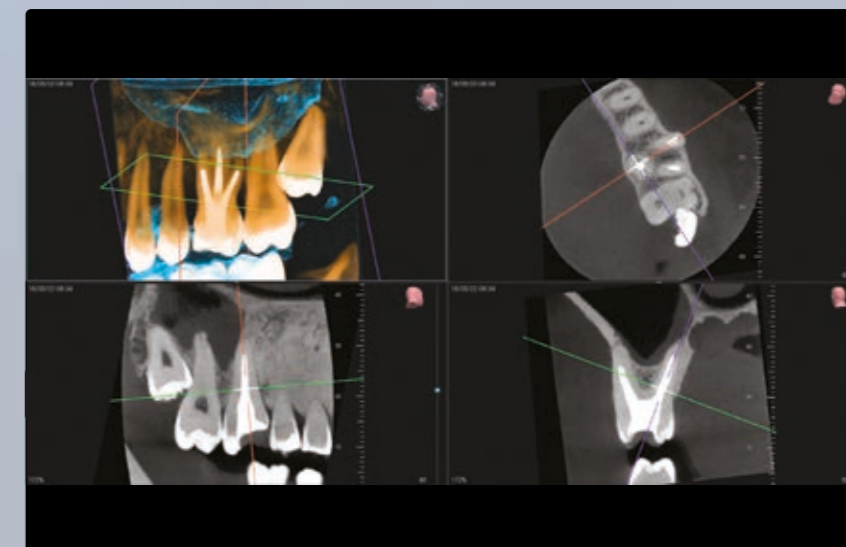
• **FOV: 7x6; 9x9; 9x16**

ENDO PACK

For endodontic and implantology analysis at maximum resolution, reaching 50 µm (Voxel). Limits the area exposed to X-rays and so minimises the emitted dose, most importantly with paediatric patients. Optional pack that can be paired with the Essential and Superior configurations.

• **FOV: 4x4; 5x4**

DIAGNOSTICS
2D ULTRA HD

With the Direct Conversion Detector, NEWTOM GiANO HR brings state-of-the-art technology into the dental practice.

Unlike traditional sensors, the Direct Conversion Detector does not require conversion of X-rays into visible light as it is capable of sensing it directly and converting it into precise, accurate digital signals. In this way, extremely highresolution diagnostic images can be obtained at low X-ray doses, and highly detailed images can be produced even where quick scans in ECO Dose are more suitable.
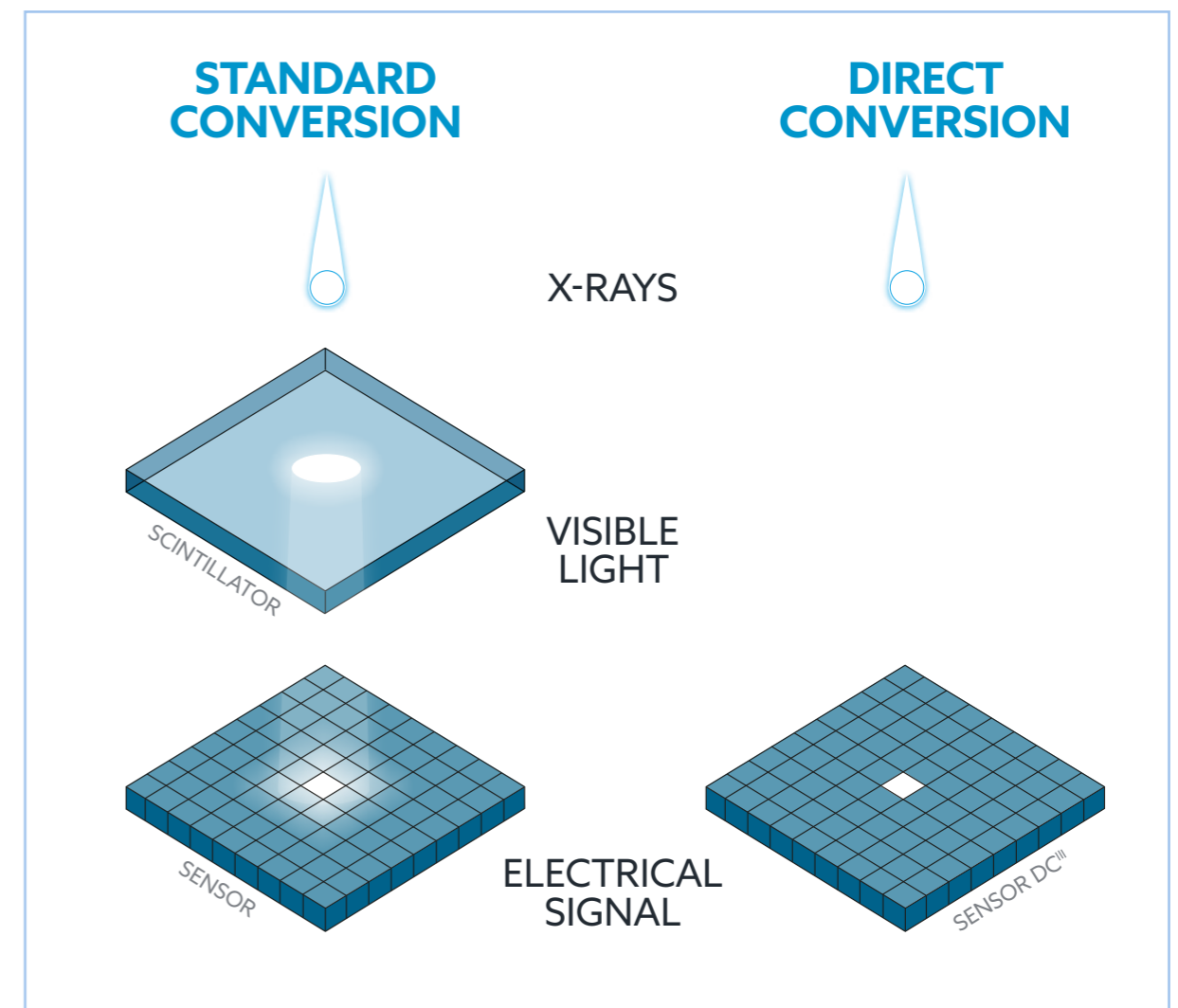
MULTIPAN

Generates a set of differently-focused orthopanoramic images in a single scan. This function is essential for the study of complex morphologies. The number of X-ray images, from which to select the one that best matches the specific diagnostic requirements, can vary from 5 (PAN HD with STANDARD sensor) to 11 (PAN UltraHD with DC^{III} sensor).
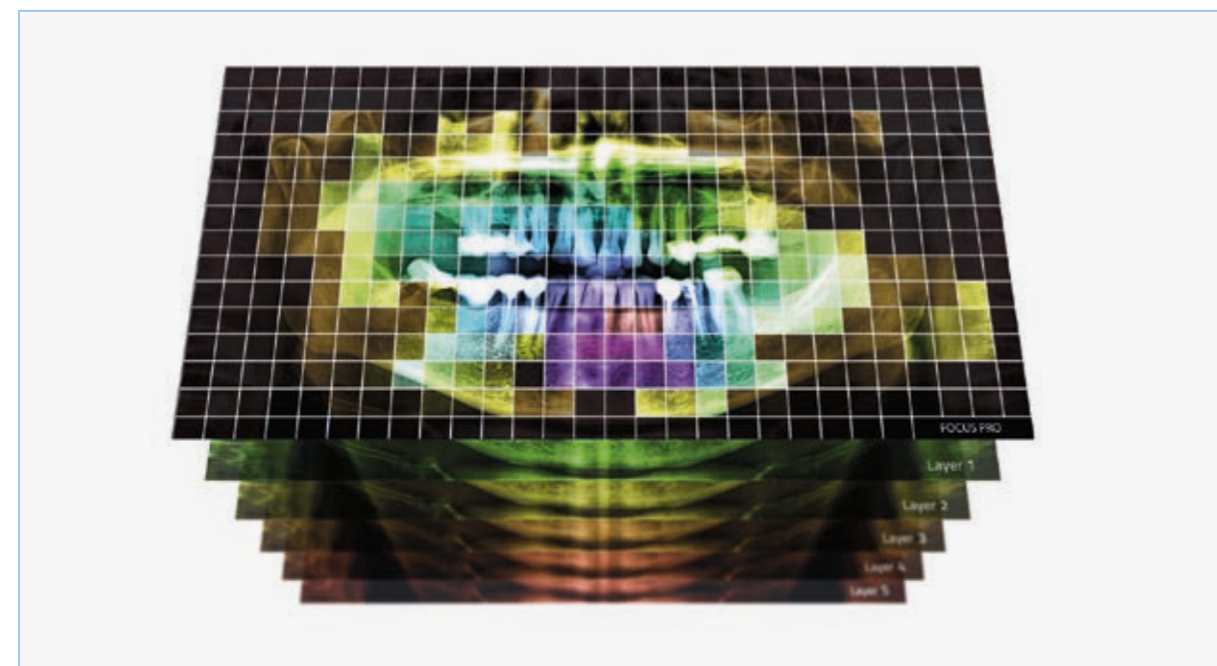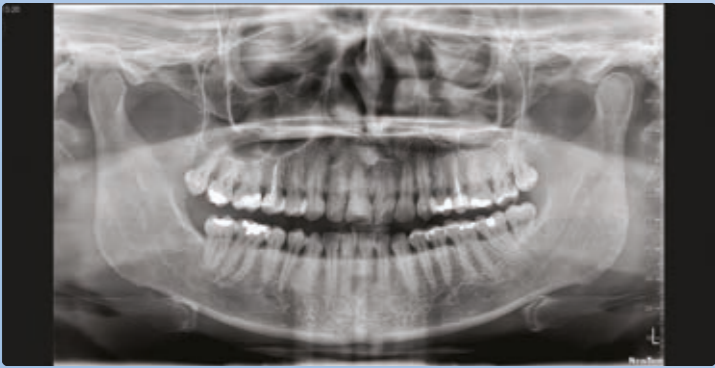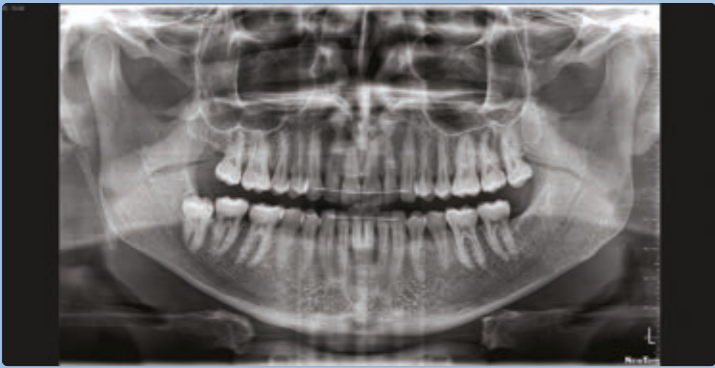
FOCUS PRO

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

STANDARD CONVERSION

DIRECT CONVERSION

X-RAYS

VISIBLE LIGHT

ELECTRICAL SIGNAL

SCINTILLATOR

SENSOR

SENSOR DC^{III}

SCAN	
STANDARD PANORAMIC IMAGE	Allows a complete, accurate view of the dental arches, maxillary sinuses and temporomandibular joints. The ORTHO version significantly improves the view of interproximal spaces.
DC^{III} UltraHD PANORAMIC IMAGE	For optimal image quality even at low doses, and an unmatched view of clinical details.
PAEDIATRIC PANORAMIC IMAGE	Field of view and exposure are adapted to paediatric patients' body size.

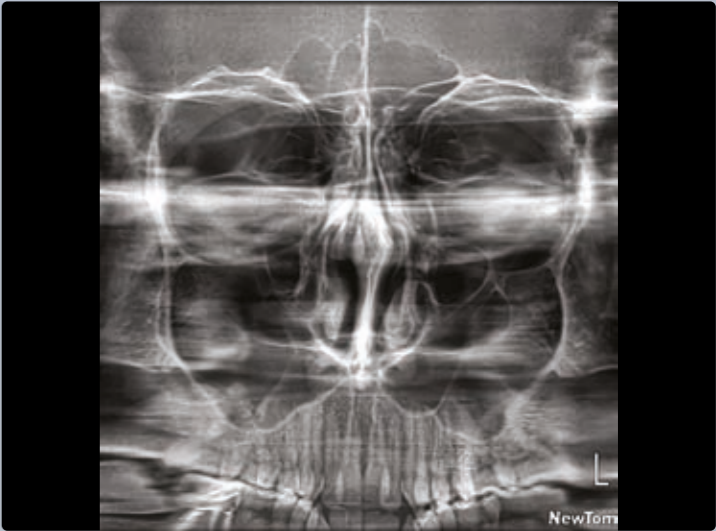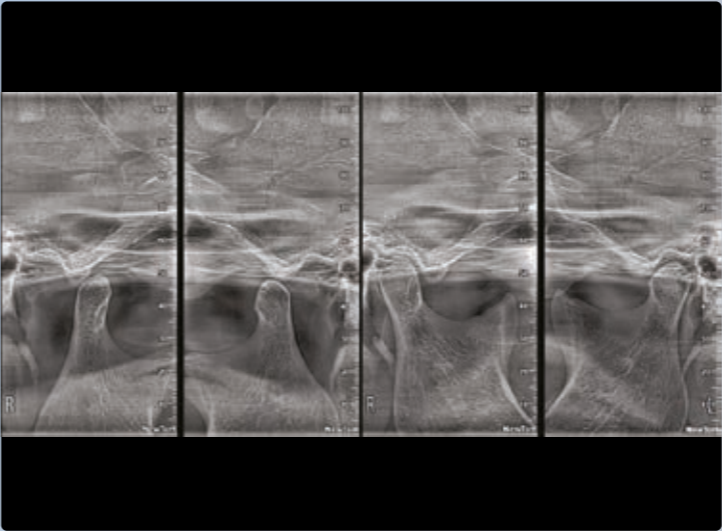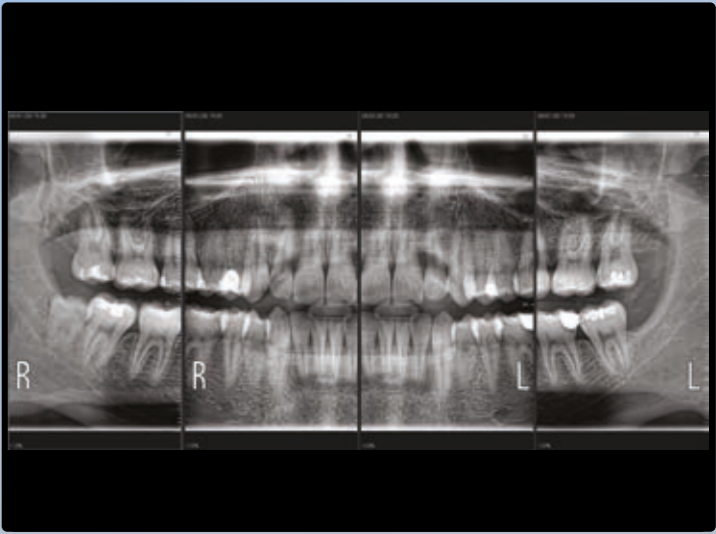| SCAN	
DENTITION	Provides clear, detailed images that are limited to the dentition area, in whole or in part: their orthogonality and definition are perfect for periodontal assessments.
BITEWINGS	Optimised collimated interproximal projection with a low dose to investigate dental crowns. An alternative to intraoral bitewings, with a less invasive, 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 AND LATERAL)	Generates lateral or postero-anterior projections, with mouth open or closed. To be effected with dedicated sub-nasal support.

Standard panoramic image

DC^{III} UltraHD panoramic image

Paediatric panoramic image

YOUR TELERADIOGRAPHY DEVICE

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

DC^{III} CEPH Ultra HD AND ECO

DC^{III} technology allows practitioners to perform Ultra HD CEPH scans, almost tripling the contrast level at a given resolution, dose remaining equal. For surgical follow-ups or paediatric examinations, the ECO option allows ultra-fast scans, high-res, low-dose postero-anterior views included.
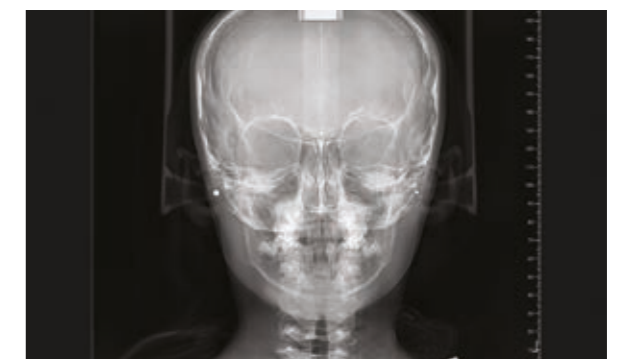
LATERAL SKULL TELERADIOGRAPHY (LL)

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

FRONTAL SKULL TELERADIOGRAPHY (AP-PA)

Using frontal projections, this helps users investigate the presence of any asymmetries or 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.

CEPH SCANS AND FEATURES

The teleradiographic arm allows for cephalometric scans and carpal imaging; furthermore, thanks to the modular design of NEWTOM GiANO HR, it can be positioned either on the right or left of the machine or added – in CEPH Ready configurations – at a later time.

Patients enjoy an exceptionally comfortable experience thanks to a head support with a height-adjustable forehead support and side rods (available in two sizes, standard for adults and long for children, both complete with comfortable ear pads).

Image not captured by device

NEXT-GEN 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 treatment time, making your practice more efficient.

Smooth communication with patients
Advanced diagnostic tools make it easier to explain treatment plans to patients, improving their understanding and 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 improving diagnostic capacity.

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

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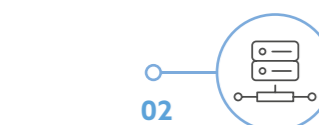
Guaranteed compatibility
Key communication protocols such as DICOM, RIS/PACS and TWAIN are supported, ensuring secure transmission and storage of medical images.

ENHANCES CLINICAL EFFICIENCY BY OPTIMISING THE WORKFLOW

01

Data import
Automatically import scans and images from NNT and the other main dental imaging software tools.

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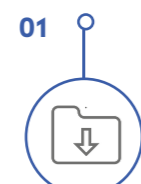Create patient records with the utmost ease and security to ensure clear, accessible consultation at all times.

02

Treatment sharing
Create personalised patient health reports and illustrate the treatment plan clearly.

Neowise
Software

03

06

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

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

05

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

04

ARTIFICIAL INTELLIGENCE
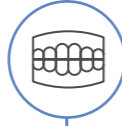
INNOVATIVE CLINICAL SOLUTIONS

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.
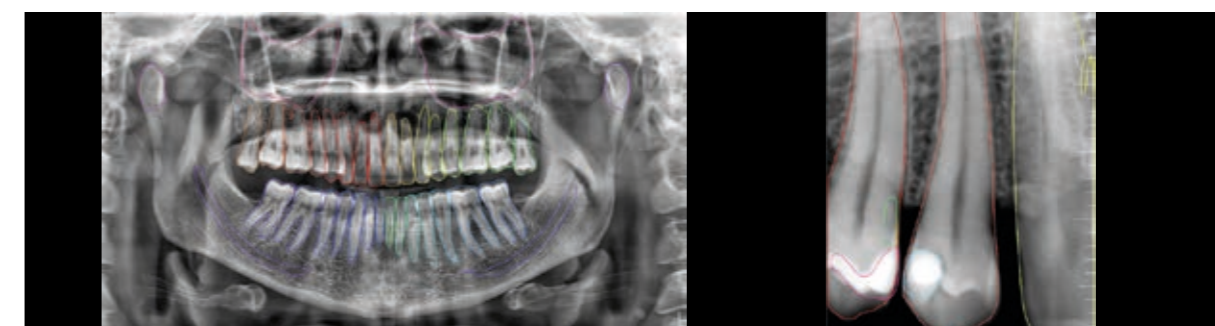
Detection of panoramic curves on CBCT scans
Identification of inferior alveolar nerve in volumetric scans
2D and 3D Data Classification
Anatomical and pathological analysis for 2D intraoral and panoramic scans
Segmentation of 3D anatomical structures
Airway identification in cephalometry for the diagnosis of OSAS pathologies
Alignment of latero-lateral teleradiography with photo of patient
Alignment and combination of CBCT scans with optical impressions
Detection of cephalometric points and creation of tracings
Smile Design module to simulate aesthetic treatments in frontal sectors
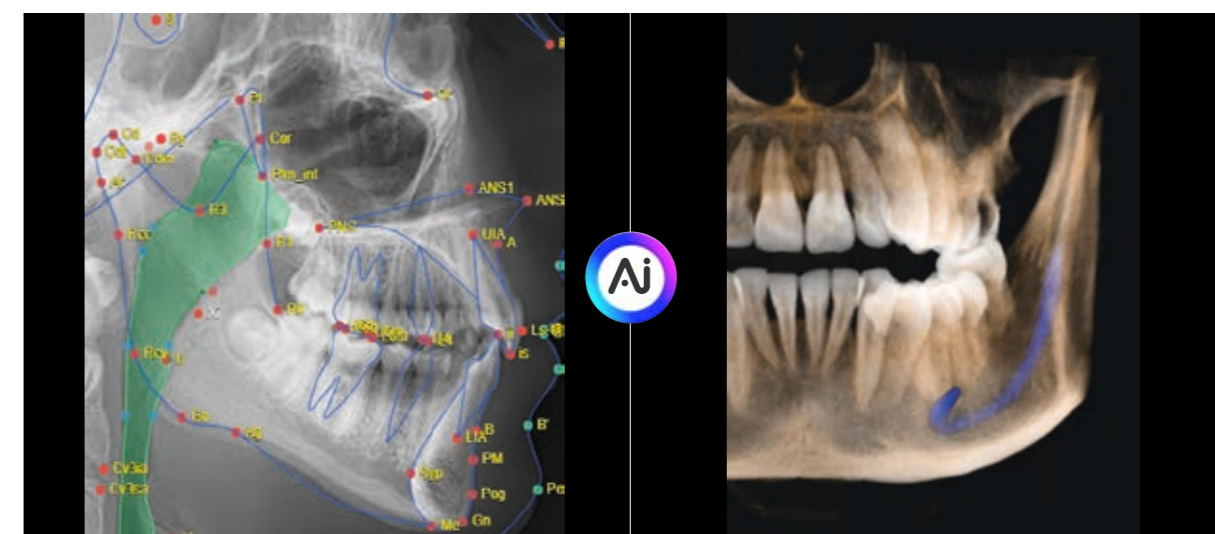
3DPic:
EVERYTHING UNDER CONTROL

3D images of face and dentofacial structures allow for more complete diagnosis and predictions and smoother communication with the patient.

With the 3DPic function, NEWTOM GiANO HR provides realistic images of the face that can be superimposed on X-ray images. Accurate display of proportions and asymmetries helps predict post-treatment changes, particularly in orthodontics and surgery maxillofacial.

Obtained without emitting radiation, images produced by 3DPic aid patient understanding and reduce the required number of sessions by combining multiple sources of diagnostic information.

SafeBeam™ TECHNOLOGY

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.

DOSESAVER TECHNOLOGY

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

ECO DOSE PROTOCOLS

Available for both 2D and 3D scanning, these protocols provide accurate images but with lower doses than in standard scans. 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.

QUICK SCAN

REAL VISION MULTIMEDIA PACK SYSTEM

Dual camera and intercom for greater ease of use and guided patient positioning during scan set-up. Constant monitoring and perfect alignment of the diagnostic investigation directly on the patient's face.

NEW HEAD SUPPORT AND BITE

The ergonomic head support adapts to the shape of individual patients' heads and, together with the two supplied bites, ensures proper positioning of the arches, a high-quality final result and diagnostic repeatability of scans, even with edentulous persons, children or patients without incisors.

Laser beams also let users perform direct, precise, on-patient selection of the most suitable FOV height or check whether the selected FOV is suitable prior to exposure.

COOLING SYSTEM

Allows maintenance of high-quality, accurate 2D and 3D images even during continuous use, maximising performance and minimising the risk of any machine downtime.

INTEGRATED COOLING SYSTEM

BEYOND VISION

1775 mm (69.9")*

STANDARD 1460 mm (57.5")*

STANDARD MIN 1680 mm (66") – MAX 2470 mm (97")*

IMAGES	2D	3D
Type	PAN (Adult, Child), BITEWING, DENT, SIN (Cent, L, R), TMJ (Front, Lat), CEPH (Lateral, AP-PA, Carpus)	MODEL, DENT,SIN, TMJ, AIR, MAXILLO, EAR, SPINE (Cervical)
(Maximum) theoretical resolution on the patient plane	PAN: 5.6 lp/mm (pixel 79 µm) BW: 7.6 lp/mm (pixel 66 µm) CEPH: 5.7 lp/mm (pixel 88 µm)	CBCT: 7.4 lp/mm (voxel 68 µm)
Fields of view on patient (adult and child) (L) x (H) in cm	PAN STD: 23.2x12.0 cm PAN CHILD: 17.8x10.7 cm DENT (Full): 13.9x9.3 cm BITEWING: 17.3X6.4 cm CEPH LL (full skull): 25.5x19.6 cm	ESSENTIAL CONFIGURATION (DENT, SIN, MODEL): 6x6; 8x6; 8x8; 10x6; 10x10; 11x8; 13x6; 13x10 SUPERIOR CONFIGURATION (DENT,SIN, MODEL + TMJ, AIR, MAXILLO): 13x16, 15x6, 15x10, 15x16, 17x10, 17x14, 17x18 ENDO PACK (ESSENTIAL and SUPERIOR configurations optional): 4x4, 5x4 TMJ PACK (ESSENTIAL configuration optional): 15x6, 15x10 CERVICAL & EAR PACK (SUPERIOR configuration optional): 7x6, 9x9, 9x16
Scan times (typical)	PAN: 13.9 s (Ortho); 11.8 s (Standard); 6.0 s (Quick); 5.0 s (Sin R/L) CEPH LL: Long 9.02s (Standard); Long 5.14 s (Quick)	Super HD: 24s Standard: 14.4s QuickScan: 6.4s
INSTALLATION		
Weight (kg)	2D basic machine: 152 kg 3D basic machine: 155 kg CEPH arm with sensor: 20 kg	
X-RAY GENERATOR		
Generator type	Constant potential DC[III]	
Anode voltage and current	60-90 kV; 2-16 mA	
Focal spot	0.5 mm (IEC 60336)	
POWER SUPPLY		
Voltage and frequency	115 – 240 V Single-phase 50 / 60 Hz	
Maximum current absorbed in working conditions	20A at 115V; 12A at 240V	
Current absorption in standby mode	Approx. 2 A at 115 V; Approx. 1 A at 240 V	
Adjustment method	Automatic voltage/frequency adaptation	
DETECTOR	**2D (PAN & CEPH)**	**3D**
Detector type	CMOS (CsI) or Direct Conversion (DC[III])	IGZO 3D
ERGONOMICS		
Patient positioning	Suggestion from virtual control panel - Servo-assisted alignment, 3 laser guides (Class 1 - IEC 60825-1) - 3D Scout View - Positioning cameras (optional)	

*Measurements take into account the configuration with the CEPH arm mounted on the left and the easyaccess base

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NEWTOM
CONE BEAM 3D IMAGING

cefla

Making Your Life Better.