NewTom GO
COMPLETE.VISION

COMPLETE AND VERSATILE 2D/3D IMAGING

According to the standards in force, in extra-EU areas the availability and specifications of some products and/or characteristics may vary. Please contact your local distributor for further information. Pictures are for illustration purpose only.
THE 2D/3D IMAGING DEVICE THAT EXPANDS DIAGNOSTIC POTENTIAL. THE IDEAL COMBINATION OF EXCELLENT 2D PERFORMANCE AND THE MOST INNOVATIVE 3D TECHNOLOGY.

Technological research, reliability and innovation. Designed by 3D CBCT pioneers in the dental-maxillofacial sector, NewTom offers the superior performance and outstanding quality of 2D/3D imaging in a versatile user-friendly device.
GO 2D/3D is a CBCT device that offers high resolution images, exceptional performance and the utmost safety. Low dose protocols and the exclusive SafeBeam™ technology allow to adapt the dose released, based on diagnostic needs and the dimensions of the anatomical area, to protect the patient’s health.

Ergonomics and the adaptive alignment system ensure excellent positioning of the patient and perfect focusing for clear and detailed images.

The virtual console on tablet or PC is the ideal device to guide the operator during all phases of examinations. NNT is the technologically advanced software platform to manage, process, consult and share diagnostic images.

**USER-FRIENDLY AND VERSATILE.**

The best 2D/3D imaging that expands the diagnostic potential of every clinic.

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**MINIMUM X-RAY DOSE**

ECO Dose functions and SafeBeam™ technology, which automatically adapts to the dose radiated to the patient, makes patient safety a priority.

**ACCESSIBLE TECHNOLOGY**

Only the best results with excellent ergonomics and stable positioning of the patient.

**ACCURATE DIAGNOSIS**

Newfom image acquisition technology and the powerful NNT software provide exceptional support for diagnoses that are always precise and detailed.

**ACCESSIBLE TECHNOLOGY**

Only the best results with excellent ergonomics and stable positioning of the patient.

**MINIMUM X-RAY DOSE**

ECO Dose functions and SafeBeam™ technology, which automatically adapts to the dose radiated to the patient, makes patient safety a priority.

**MAXIMUM CONNECTIVITY**

The X-ray images acquired can be easily stored, exported and shared with specialist third party software.
THE BEST CHOICE OF 2D/3D IMAGES.

IMAGING EXCELLENCE

3D IMAGING
The Adaptive-FOV system allows to select the field of view that is best suited for the diagnostic needs, based on patient build and on anatomical region of interest. The NNT software generates detailed images with realistic rendering. The implant simulation device offers excellent support for correct treatment planning and communications with the patient.

2D IMAGING
A complete set of 2D software generates very high quality software for a wide range of therapeutic needs. The special MultiPAN function provides, with a single scan, 5 images from which the user can choose the panoramic view that best suits his diagnostic needs. Instead, the ApT function allows to automatically obtain clear and homogeneous images of all anatomical regions by autoadapting to the patient.

MINIMUM DOSE
GO 2D/3D combines excellent image quality and low radiation dose by using pulsed emission CBCT technology, which allows to considerably reduce exposure. Specific ECO protocols and autoadaptive technology further reduce emission to suite diagnostic needs and the patient’s actual build, thus underscoring NewTom’s interest in patient health.

NEWTON KNOW-HOW

ADVANCED IMAGE CHAIN
Images are acquired using a high frequency pulsed emission X-ray generator coupled with a single 16-bit sensor for 2D/3D images. Latest-generation technology at the service of dental diagnostics.

AUTOADAPTIVE FUNCTIONS
GO 2D/3D offers advanced functions to automatically adapt image acquisition to the anatomical characteristics of the patient and to improve image processing. The software filters compensate for any artifacts or problems associated with patient morphology.

HIGH RESOLUTION IMAGING
When required, GO 2D/3D produces volumes up to an exceptional resolution of 80 μm, which allows to carefully examine even the smallest anatomical detail. Very high quality scans for every accurate diagnoses.

MAXIMUM PERFORMANCE

ADVANCED SOFTWARE
NNT, NewTom’s powerful software, offers all functions required to process and analyse 2D and 3D images. An essential tool to perform correct diagnoses and establish the most suitable therapy.

OPERATIVE WORKFLOW
The virtual console is a very easy and user-friendly device for guided examinations. Image management and processing can also be performed with APP viewer for iPad. Compatibility with third party software, complete and precise reports, and the possibility of remote technical support enhance efficiency of the clinic’s workflow.

SPECIALIST APPLICATIONS
Excellent image quality, extraordinary performance and multiple dedicated protocols make GO 2D/3D the ideal tool for implantology, endodontics, periodontics and radiology applications as well as maxillofacial surgery.
SUPERIOR DIAGNOSTIC QUALITY.

Ultra clear images that are ideal for every clinical need.

GO 2D/3D generates images that are always clear and detailed for precise diagnoses in all situations. Superior quality obtained with advanced algorithms and protocols, and with an image sequence comprising cutting edge technological features.

Using a single native 16-bit sensor produces 2D/3D images with thousands of grey levels, reduces examination selection times and improves operations. The high frequency generator and pulsed emission precisely adjust exposure, even automatically, to always obtain excellent scan quality.

HiRes

HiRes mode scans produce very high definition images with voxel size 80 μm. It is also available with maximum FOV 10 x 10 cm and combined with the ECO Scan protocol. This function is essential for an in-depth study of anatomical details.

aMAR

The aMAR (autoadaptive Metal Artifact Reduction) algorithm clearly shows the anatomical structures even when there are metal objects, such as amalgam or implants, that would impair image quality. This function of the software recognises the metal elements present and automatically generates an additional set of better quality images for a clearer view with artifacts reduced to a minimum.

MultiPAN

Without an increase in dose, with a single scan the exclusive MultiPAN mode generates a set of 5 panoramic images corresponding to five different focal planes. The operator can choose the most suitable one for his diagnostic needs.
3D IMAGING. ADVANCED DIAGNOSIS.

High-quality 3D images to improve treatment planning.

Detailed volumes and a broad range of FOVs with 4 image acquisition modes. GO 2D/3D offers the ultimate 3D technology for volumetric examinations that are always precise. The Adaptive FOV function allows to define the area to be analysed and to reduce the anatomical region exposed to radiations.

The choice of four scan modes allows to adapt the standard of detail and emissions to suit the actual diagnostic needs.

COMPLETE ADULT DENTITION

The complete 10 x 10 cm FOV is ideal to see inferior and superior third molar ratios with complete teething, including the maxillary sinus floor. Clear images even when there is metal or amalgam.

COMPLETE CHILD DENTITION

Small FOVs that are specific for paediatric applications can be chosen. The 8 x 7 cm volume offers high quality images of a child’s complete dentition. It is especially useful for orthodontic applications and to diagnose the most severe diseases, always clear and detailed as a result of filters to reduce artifacts.
COMPLETE CHILD/ADULT SUPERIOR ARCH

Volumes with FOVs 10 x 6 cm and 8 x 6 cm produce images of localised anatomical districts, such as, for example, a maxillary sinus with suitable lifting to insert an implant. The ideal solution in the field of implantology to assess both implant site and bone density.

COMPLETE CHILD/ADULT LOWER ARCH

The 10 x 7 cm and 8 x 7 cm FOVs are designed for analysis of the mandibular region. In the case of impacted canines, where it is necessary to assess their relationship with the mandibular canal and adjacent anatomical structures, the advanced image acquisition and processing functions allow to easily and rapidly highlight the slices of interest.

UPPER AND LOWER LOCAL INVESTIGATIONS

With FOVs 6 x 7 cm and 6 x 6 cm, scans can be performed with very high resolution to clearly see even the smallest detail. This mode is especially indicated for endodontic and periodontic applications.

STUDYING ADULT/CHILD MAXILLARY SINUSES

Complete view of maxillary sinuses and of upper airways, including the superior dental arch, using FOV 10 x 10 cm and 8 x 10 cm.
**COMPLETE 2D VISION.**

**TEMPOROMANDIBULAR JOINT**

The trajectories dedicated to the temporomandibular (TMJ) joints generate four projections with a single scan: two lateral and two postero-anterior, with mouth either open or closed.

**MAXILLARY SINUSES**

The SIN software uses a focal layer that has been specially designed to improve maxillary sinus examinations. A dedicated support allows to obtain both frontal and lateral slices.

**DENTITION**

Clear detailed images limited only to the teeth, either whole or partial, with orthogonal projection and better signal-noise ratio. Ideal for periodontal controls.

**BITEWING**

Optimised collimated interproximal projection with a low dose to study dental crowns. An alternative to intraoral bitewings, with a less invasive and more comfortable procedure.

**ADULT PANORAMIC IMAGING**

Standard panoramic software provide a complete, accurate view of the dental arches, maxillary sinuses and temporomandibular joints.

**CHILD PANORAMIC IMAGING**

Child panoramic imaging with vertical collimation and low radiated dose. Field of view and exposure are adapted to the paediatric patient’s build.
MINIMUM DOSE, MAXIMUM DIAGNOSTIC QUALITY.

Top quality imaging with a very low dose of radiations. Protocols defined by NewTom research in over 20 years of experience allow to automatically adapt exposure based on the anatomical characteristics of the patient, on the anatomical district examined and on the actual diagnostic needs.

ECO Scan AND ADAPTIVE FOV

NewTom, ever keen on patient health, was the first to use pulsed emission with CBCT technology applied to dental imaging, thus considerably reducing the dose of radiations emitted during 3D examinations. The introduction of the 3D ECO Scan protocol (ultra rapid scan of only 6.4 seconds and actual emission time of only 1.6 seconds) provides the ideal solution for post-surgery follow-up examinations and for all situations that need to reduce the radiated dose to a minimum. Instead, the 3D Adaptive FOV function allows to reduce the radiated anatomical district in order to adapt to the different morphological features of adults and children or to simply perform sectional examinations up to FOV 6 x 6 cm, whose minimum effective dose in ECO mode is 9 μSv.

ECO Pan AND VARIABLE COLLIMATION

GO 2D/3D offers several PAN software with variable collimation for adults and children, image acquisitions only for teeth and bitewing views. The ECO Pan protocol allows to perform an ultra rapid scan (6.6 seconds) and to further reduce the radiation dose up to 5 μSv. Versatile, high quality 2D diagnoses with limited emission.

SAFEBEAM™

SafeBeam™ technology developed and patented by NewTom automatically adapts the radiated dose to the patient’s anatomical characteristics in the chosen area for investigation, thus avoiding exposure to an unnecessarily high dose. An exclusive function that allows GO 2D/3D to control both power and intensity of radiations, and to obtain clear and detailed 2D and 3D images regardless of patient bone dimensions and density.
EXCELLENT ERGONOMICS AND ACCESSIBILITY.

Excellent comfort for rapid and stable positioning of the patient.

Designed to ensure excellent positioning of the patient, GO 2D/3D allows to rapidly find the correct position for examinations that are always perfect. The device has an ideal functional structure for daily use that flawlessly merges into the clinic’s diagnostic workflow. The outstanding ergonomic features of the device ensure excellent adaptability to every patient and, hence, ideal results for all applications.

EXCELLENT POSITIONING

GO 2D/3D offers outstanding patient stability with stable and comfortable positioning, which is essential for perfect focusing and images that are always clear. The angled position of the rotary arm facilitates patient access and ensures a correct view for the operator.

The column, which features a two-speed drive, reaches the desired height in a few seconds and precisely performs fine adjustments of patient position (e.g., for the Frankfurt Plane).

The head support unit ensures exceptional stability with 5 contact points: three auto-stabilising supports for head, bite and chin rest.

Two metal handles for effective patient support and to ensure that the patient is correctly positioned during all phases of the examination.

EASY ACCESS

Extensive column excursion and obstacle-free access to the scanning area allow to easily examine even patients with motor difficulties or on wheelchairs.
ACCURATE DIAGNOSES IN ALL CONDITIONS.

The auto-adaptive functions of GO 2D/3D allow to perform accurate examinations with extremely useful images for diagnostic purposes and with an assured high quality result.

The operator has tools for patient positioning and guided alignment, which yield perfect focusing.

VIRTUAL CONSOLE
Rapid and user-friendly image acquisition with the virtual console on PC or a dedicated software for iPad. The operator follows all examination phases, from the choice of investigation to initiation of the scan.

ALIGNMENT CHECKS
Before performing a 3D scan, two scout images allow to precisely check and adjust patient alignment via PC-controlled servo-assisted movements.

GUIDED ALIGNMENT
Three laser guides and a wide front mirror allow rapid and precise positioning of the patient. The device can be controlled by the operator with a user-friendly on-board keyboard or by using the dedicated App for iPhone and Android.

Self-adaptive PANORAMIC IMAGING
The ApT function (Autoadaptive picture Treatments) allows to generate clear and homogeneous high quality panoramic images. The system automatically adjusts focus, brightness, contrast and filters based on the anatomical district and tissues examined, always ensuring excellent results.
NNT, ADVANCED SOFTWARE FUNCTIONS.

Extensive sharing and processing power with the ultimate imaging platform.

NewTom’s NNT software offers all functions required to perform, process, display and share 2D and 3D examinations. NNT also provides different application modes and functions specifically intended to plan the best treatment for implantology, endodontics, periodontics and radiology applications as well as maxillofacial surgery.

IMPLANT SIMULATION

Rapid processing of 3D volumes acquired with realistic images to perform simulations either with implants present in the extensive library or with personalised ones. Advanced NNT functions allow the user to assess bone quality (on the MISCH scale) and adjacent anatomical structures. This data is essential to define the best implant and correct insertion axis.

IMPLANT PLANNING MODULAR SOFTWARE

The module allows to plan accurate and precise implant surgery procedures. The implant can be positioned by assessing both the clinical aspect (bone quality, canal position, etc.) and prosthesis details by combining 3D reconstruction of radiological data with the optical scan of an anatomical model and the relative prosthetic project (importable in STL format). The possibility of creating a surgical template for use during the clinical procedure allows to position implants with extreme precision and predictability.
COMPLETE CONNECTIVITY.

Excellent connectivity and integration with the modern systems adopted by NewTom. Workflow and clinical and diagnostic activities become much easier and highly performing.

VIRTUAL CONSOLE
Settings required for acquisition can be easily controlled from a remote virtual control panel on the PC, laptop, Windows tablet or iPad.

REMOTE ASSISTANCE
By appropriately configuring the device to use the surgery’s Internet connection, technical support can be provided from remote, and device status can be monitored.

3D/2D VIEWER
Examinations can be shared with colleagues and patients by providing the Viewer directly on CD, DVD or a USB storage device.

1:1 PRINT
Complete and flexible report for storing and sharing colour reports on photographic paper or grey scale reports on X-ray-equivalent transparencies.

OTHER ACQUISITION DEVICES
Compatibility with TWAIN and DICOM 3.0 standards guarantees NNT software management of images from other 2D/3D image acquisition devices, such as video cameras, sensors, PSP and CBCT scanners.

RIS/PACS
IHE compliant system that allows communication with RIS/PACS systems and DICOM printers. Complete services available: Print, Worklist, Storage Commitment, MPPS and Query/Retrieve.

SURGERY MANAGEMENT SOFTWARE
An open system designed for fast, efficient interfacing with the main dental surgery management software solutions via various standard VOI-D, TWAIN and/or proprietary NNTBridge modes.

SPECIALIST PLANNING SOFTWARE
Exports in DICOM 3.0 format to specialist planning software to process orthodontic treatments, prostheses, implants, orthognathic and maxillofacial surgery.

3D MILLING PRINTERS
Software modules are available to segment the reconstructed volume and export to STL format the surfaces required to create 3D models that can underpin planning and treatment.

3D SCANNER
Prosthetically guided planning by integrating (via the dedicated software module) data in STL format from optical, intraoral or laboratory scanners, with volumetric data.

MULTI-STATION DISPLAY AND PROCESSING
Image storage on a shared database in a local network that can be accessed from any workstation and iPad (only 2D). Management of multiple archives and access to password-protected data.
TECHNICAL SPECIFICATIONS.

Images 2D 3D
Type Adult and child panoramic, ECOPAN, MultiPAN, Dentition, Bitewing, PA and LL (right and left) maxillary sinuses, Temporomandibular joint (2 x LL + 2 x PA) open and closed.
Complete examination of the 2 arches in a single scan for adults and children with reduced collimation. Studies of the maxillary region with maxillary sinuses. Studies localised to region of interest.
Child examination Yes Yes
Maximum resolution from 5 to 7 lp/mm Voxel 80 μm (minimum section thickness)
Maximum field of view (mm) 280 (length); 150 (height) 102 (diameter); 96 (height)
Reduced fields of view (cm) 6 x 12.5 (Child); 6 x 9 (Dentition bitewing) 10 x 10 - 10 x 7 - 10 x 6 - 8 x 10 - 8 x 7 - 8 x 6 - 6 x 7 - 6 x 6
Maximum image data dimensions 7.5 MB 720 MB
Magnification PAN 1.2 - 1.3 1 to 1
Scan time PAN 12 s (STD) – 6.6 s (ECO) HiRes 16.8 s (Regular) - 9.6 s (ECO)
Minimum image display times Real-Time 15 s
Advanced filters Automated Adaptive Picture Treatments (aAPT) Autoadaptive Metal Artifact Removal (aMAR)

X-ray Generator
Generator type Constant potential (DC)
Anode voltage 2D mode: 60 kV – 85 kV (1 kV step); 3D mode: 90 kV (Pulsed mode)
Anode current 4 mA – 15 mA
Focal spot 0.6 mm (IEC 60336)
Exposure Control SafeBeam™
Maximum continuous anode input power 42 W (1:20 at 85 kV/10 mA)
Inherent filtration 6 mm Al eq. (at 90 kV)

Detector
Detector type Amorphous Silicon (CSI)
Dynamic range 16 bit (65,536 grey levels)

Ergonomics
Patient alignment 3 laser guides
Patient positioning 5 head contact points
Adjustments On-board keypad and/or iPhone/Android Phone 2-speed height drive
Examination selection Virtual control panel on PC, Windows tablet and/or iPad
Notes Easy access for patients in wheelchairs

Connectivity
Connections LAN / Ethernet
Software NNT with Viewer software, free
Supported protocols DICOM 3.0, TWAIN, IODS
DICOM nodes IHE certification (Print; Storage Commitment; WorkList; MPPS; Query Retrieve)
App iPad Virtual control panel for the device and for the NNT 2D viewer

Installation
Minimum available work space requirement 872 mm (L) x 1101 mm (P)
Package dimensions (L x W x H) in mm Box1 930x690x960 + Box2 1860x355x350
Weight 90 Kg (199lb)
Accessories Free standing base

Power supply
Voltage | Frequency 115 – 240 Vac, +/- 10% | 50/60 Hz +/- 2 Hz
Maximum absorbed surge current 20 A at 115 V; 12 A at 240 V
Current absorption in standby mode Maximum 0.5 A (240 V); 1 A (115 V)
Notes Automatic adaptation for voltage and frequency

Specifications subject to change without prior notice.