

VistaVox S and VistaVox S Ceph 3D from Dürr Dental

3D, 2D and Ceph X-ray images with exceptional image quality



over **50 YEARS**
X-RAY TECHNOLOGY

Taking diagnostics to the next level

VistaVox S combines diagnostic reliability with efficiency and lower radiation doses



Key features:

- Ideal 3D imaging volume matched to the jaw arch (Ø 130 x 85 mm)
- Ø 50 x 50 mm volumes in 80 or 120 µm resolution
- Excellent image quality in 2D and 3D thanks to the high-resolution CsI sensor with a pixel size of 49.5 µm
- Reduced radiation dose thanks to the anatomically adapted volume
- VistaSoft – modern, ergonomic image processing software

Ideal imaging volume, easy positioning, high image quality: VistaVox S represents a milestone in the field of 3D X-ray systems. Thanks to its unique technology, the 3D images generated with this system cover everything you need for reliable diagnosis, well-founded treatment decisions and convincing patient communication. In addition, the S-Pan technology of VistaVox S also enables pinpoint-accurate panoramic image acquisitions in superior Dürr Dental quality. Thanks to a high-resolution CsI sensor with a pixel size of 49.5 µm, you can benefit from exceptional image quality - both in 3D and in 2D. All of these things make VistaVox S not only a highly efficient solution for dentistry, but also a safe investment.



3D diagnostics: the key indications

With VistaVox S 3D images you can increase diagnostic reliability and enable accurate treatment planning. The key indications at a glance:

Tooth development	<ul style="list-style-type: none"> ▪ Hyperplasia or dysplasia ▪ Retained or impacted teeth
Fractures	<ul style="list-style-type: none"> ▪ Root or jaw fractures
Implant technology	<ul style="list-style-type: none"> ▪ Augmentation/bone formation ▪ For planning ▪ In the event of complications
Endodontics	<ul style="list-style-type: none"> ▪ Periapical examinations ▪ Complex anomalies of the root canal system ▪ Fractured root canal instruments within the root canal
Foreign bodies	<ul style="list-style-type: none"> ▪ Suspected perforation, in particular post perforation ▪ Localisation of foreign bodies in the mouth and jaw area
Salivary stones	<ul style="list-style-type: none"> ▪ Localisation of salivary stones
Pathological changes	<ul style="list-style-type: none"> ▪ Maxillary sinus area ▪ Jawbone ▪ Cysts, tumours, osteonecrosis

See what you need to see

VistaVox S offers an ideal 3D volume that is adapted to the shape of the jaw

Almost universal fit

The jaw-shaped field of view of the VistaVox S maps the diagnostically relevant range of a \varnothing 130 x 85 mm volume and is therefore visibly larger than the most commonly used volume of \varnothing 80 x 80 mm. The advantage: thanks to this changed volume shape, VistaVox S also completely covers the region of the rear molars – an essential requirement for diagnostics, e.g. for an impacted wisdom tooth.

The special feature of VistaVox S is that its imaging volume is based on the human anatomy, representing precisely the region you need covered for diagnostics in the dental region.

The ideal jaw-shaped volume is achieved with the aid of a special curved path with 540° rotation, for which the VistaVox S requires just 18 seconds. In conjunction with a tightly collimated conical beam and the highly sensitive CsI sensor, this path allows a particularly low radiation dose to be used. The VistaVox S reconstruction algorithms allow the 3D volume to be displayed in the shortest possible time.

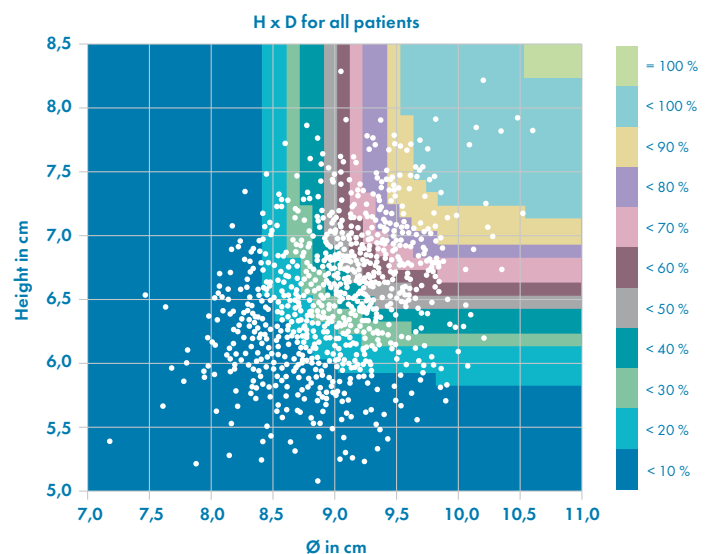
1,020 patients were examined in a study from Dr Johannes Krause. The study shows that a volume with a height of 85 mm and diameter of 110 mm is required for 100% coverage of the dental region. With a volume of e.g. \varnothing 80 x 80 mm, this means that only around 1.4% of all patients can be covered in full. By contrast, the adapted, jaw-shaped volume of the VistaVox S covers the dental region of all patients.*

Additional volumes \varnothing 50 x 50 mm

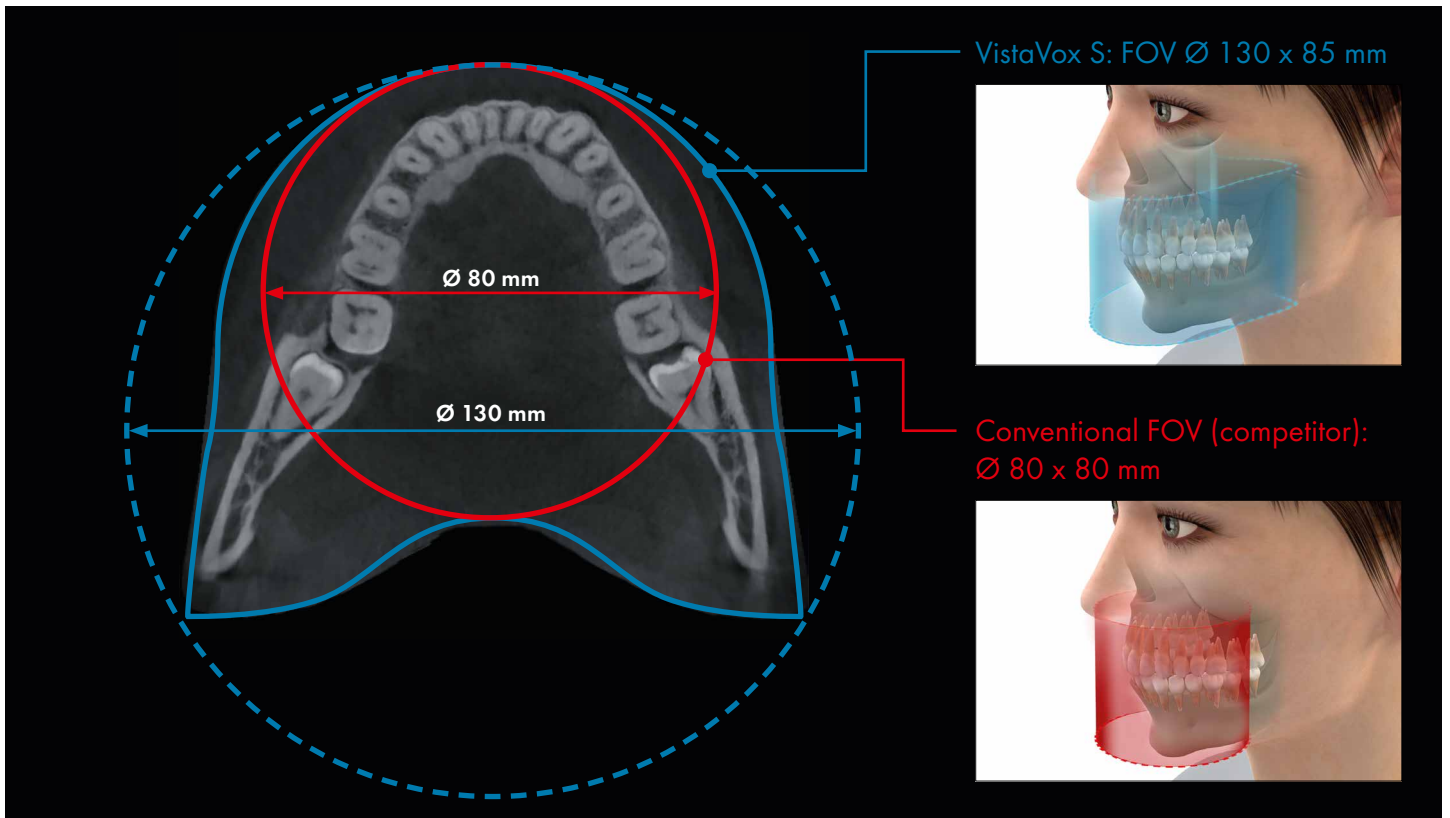
In addition to jaw-shaped images, VistaVox S offers ten further \varnothing 50 x 50 mm volumes: five each for the upper jaw and for the lower jaw. These are used if the indication only requires imaging of a certain region of the jaw, e.g. for endodontic or implant treatments. Depending on the required level of detail in the X-ray image, the volumes can be used optionally with a resolution of either 80 or 120 μ m.

SQ mode

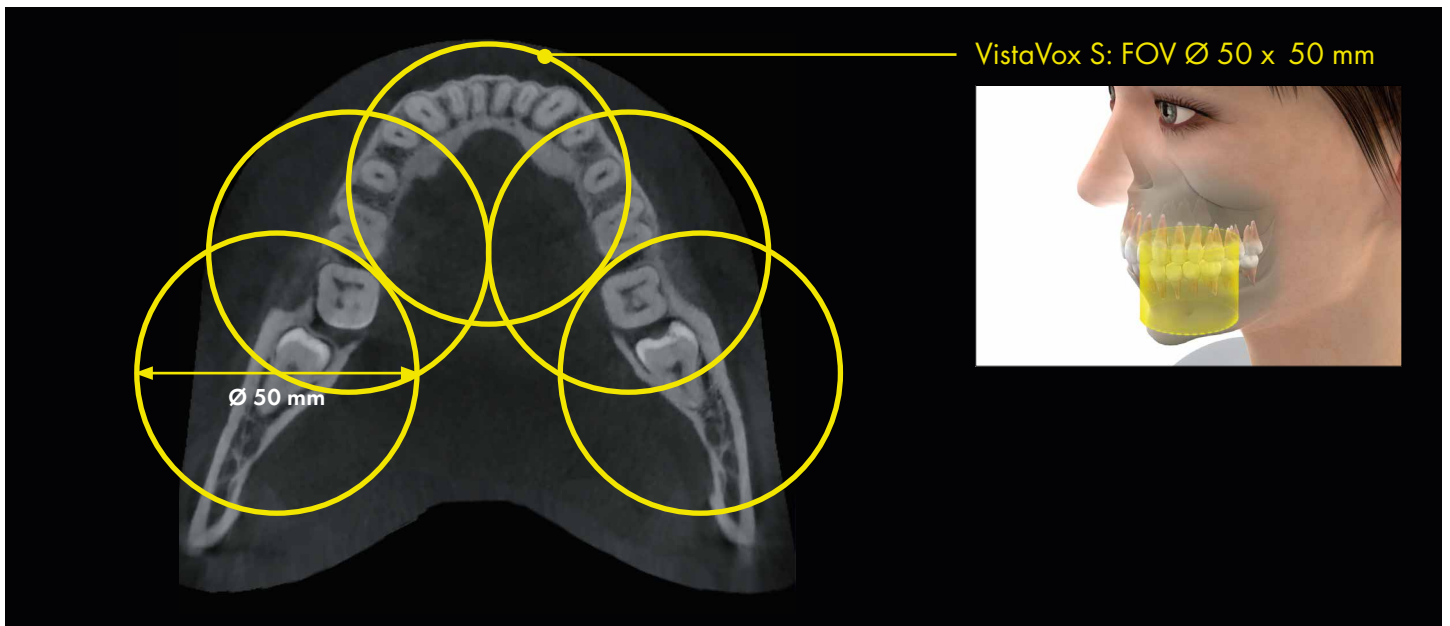
The SQ mode (Standard Quality mode) offers a further option for reducing the radiation dose. In this setting, the dose is reduced by 62% in comparison to HQ mode (Highest Quality mode). SQ mode can be used e.g. for implant planning, determination of the apical bone status, for investigation of the sinuses or for the localisation of impacted or excess teeth. SQ mode can be used in all programs.



*Source and graphic bottom right: Dissertation conclusions, Dr Johannes Krause, „Investigations into the required field of view for imaging 3D diagnostics in dental medicine“, 1 January 2013



In order to visualise the FOV of VistaVox S (blue) in the axial view, the conventional volume of \varnothing 80 x 80 mm (red) has also been marked here for comparison purposes. The jaw-shaped volume displays the region of a \varnothing 130 volume that is relevant for the diagnosis.



In addition to jaw-shaped images, VistaVox S offers ten further \varnothing 50 x 50 mm volumes: five each for the upper jaw and for the lower jaw.

2D images with exceptional image quality



VistaVox S offers not only excellent value for money, but will also help you and your surgery team to increase your flexibility. In addition to CBCT images, you can also use VistaVox S to generate brilliant OPGs, which set new standards in terms of the image sharpness of extraoral images. Thanks to this versatility, the new VistaVox S will really add value to your surgery. The unit also raises the bar in terms of efficiency. It enables the scan of a complete panoramic image in a very short time of just seven seconds with an exceptionally low radiation dose. This will save you valuable time – not only in comparison to conventional X-ray solutions.

Key features:

- S-Pan technology for easier diagnostics
- CsI sensor for improved image quality and reduced radiation exposure
- Extremely fast: panoramic images from 7 seconds
- Tolerant of typical positioning errors – thanks to the S-Pan technology

Panoramic X-ray programs

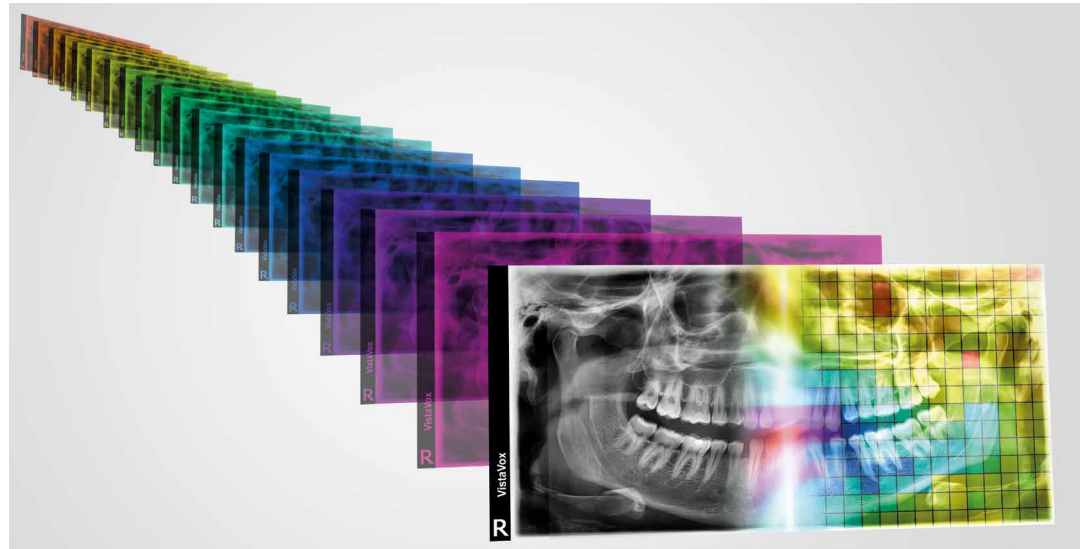
With a total of 17 X-ray programs, you are well equipped for every diagnostic requirement. In addition to the standard panoramic program, VistaVox S also offers:

- Half-side recordings of right, left and front
- 4 child programs*: an imaging mode with a smaller exposure area and a 45-56% reduction in the dose without any loss of diagnostic information
- 5 programs for orthogonal X-ray images
- 2 programs for temporomandibular imaging (functional diagnosis)
- 2 programs for sinus X-ray images to display paranasal sinuses

*Child programs: for children and adolescents from 7 years on.



Image taken with S-Pan technology



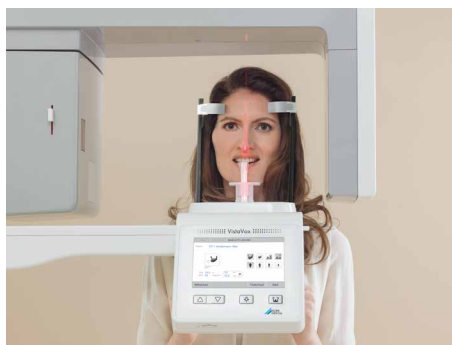
S-Pan technology: extremely sharp images for even more reliable diagnostics

With S-Pan technology, the image regions that best correspond to the actual patient anatomy are automatically selected from a large number of parallel layers. These image parts are merged to form a panoramic image, which focuses on the actual anatomy of the patient. Deviations from the 'average dentition' are taken into account, as are individually-angled teeth. The result is an image of impressive clarity, in which you will be able to immediately and effortlessly locate all anatomically relevant structures. Since the reconstruction is aligned to the actual position of the bite, incorrect positioning is compensated for to a certain extent. This saves time for the surgery and prevents the patient from having to have repeat images taken.



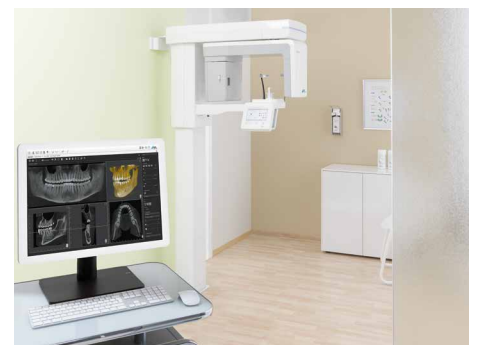
The display: all of the functions at a glance

The innovative 7" touch-display of the VistaVox S guides the operator reliably and clearly through the necessary steps. Handling and navigation are exceptionally intuitive, ensuring smooth processes while taking radiographs.



Simple and efficient patient positioning

Three light lines (sagittal, Frankfurt plane and Canine) for 2D images and two light lines (sagittal and horizontal plane) for 3D X-ray images make positioning a pleasant, easy and efficient task.



Fits in every dental practice

The elegant design of the VistaVox S allows it to be positioned in many different places in your surgery rooms. Thanks to its compact design, it can be easily integrated into your practice layout.

VistaVox S Ceph – exemplary ergonomics and efficiency

Time-saving Cephalometric exposure with a low X-ray dose

Short scan time and high image quality with a low X-ray dose

The very short scan time of just 1.9 seconds helps to avoid motion artefacts and to reduce the radiation dose. The modern high-sensitivity CsI sensors enable excellent image quality.

3-in-1 X-ray system

In addition to the various CBCT volumes and the 17 panoramic programs, VistaVox S Ceph also offers six modes for all types of cephalometric exposures:

- Head Lateral
- Head Full Lateral
- Head PA
- SMV (submentovertex)
- Waters View
- Hand



Head Lateral L



Head PA



SMV (submentovertex)



Waters View



Hand (Carpus)

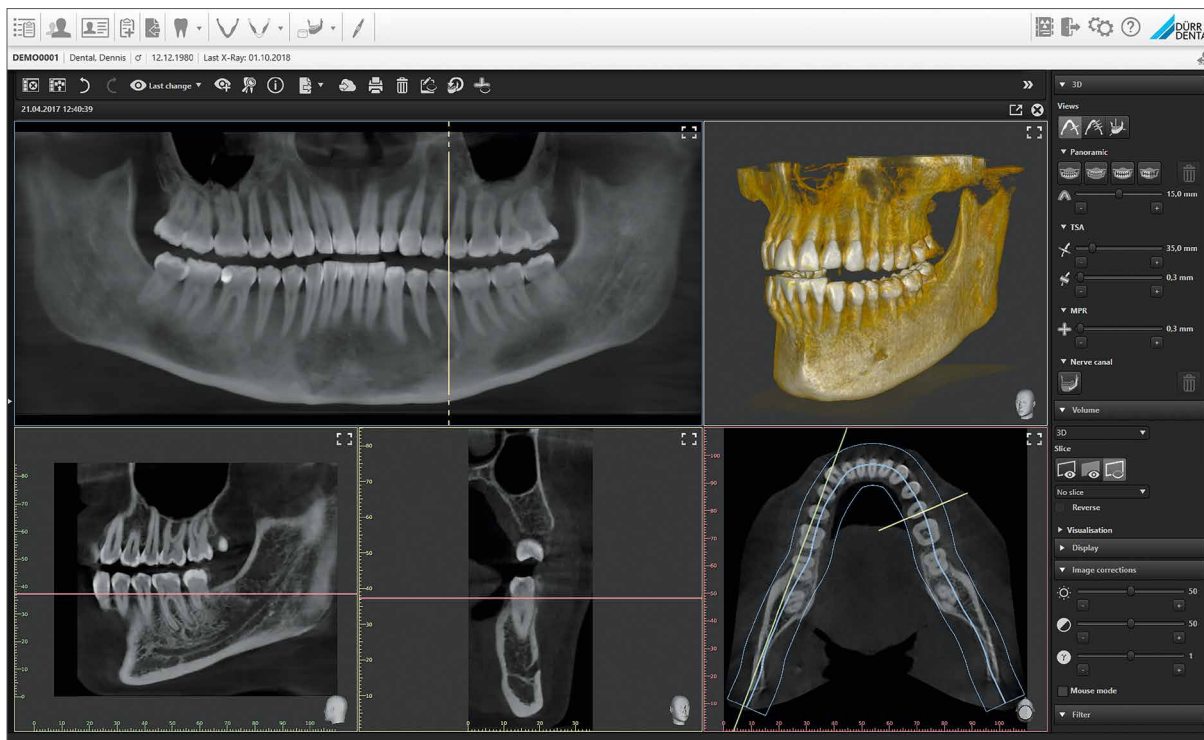
Saving you time and money

VistaVox S Ceph is equipped with two high-end CsI sensors. The advantage: there is no need for the cumbersome process of unplugging and reconnecting between the 3D X-ray unit and the Ceph boom. To start a Ceph X-ray image acquisition, all you need to do is select the corresponding program mode.



VistaSoft: simple workflow, intuitive working

VistaSoft is a particularly comfortable and efficient solution for the capture, editing and display of digital 2D and 3D X-ray images.



VistaSoft is intuitive to operate and opens up additional options for reliable diagnostics. For example, images can be edited using digital filters that adjust the contrast and sharpness of the X-ray image to assist the diagnosis. The network-capable software supports the export of DICOM data as well as various interfaces to all standard practice management softwares. The new design of VistaSoft has been optimised for professional diagnostics so that it offers you the best possible support. Thanks to the one-click principle, the software is quick and easy to operate – all the functions you need on a daily basis are just a single mouse click away. This will make your work faster than ever before.

Easy image comparisons on the light table

VistaSoft enables the reproduction of video, X-ray and 3D images on a shared digital light table. This allows you to consult images from different sources in your diagnostics. All 3D views can be rotated and tilted for optimum alignment. With the aid of a 'navigation head', which always displays the current position, orientation is very easy in the different views.

All notes created in each layer can be quickly located with the aid of a list: with just one click, the view will jump to the corresponding layer, dispensing with the need for laborious searches. The visualisation of implants is also an important function for implantology – and an essential part of patient communication.

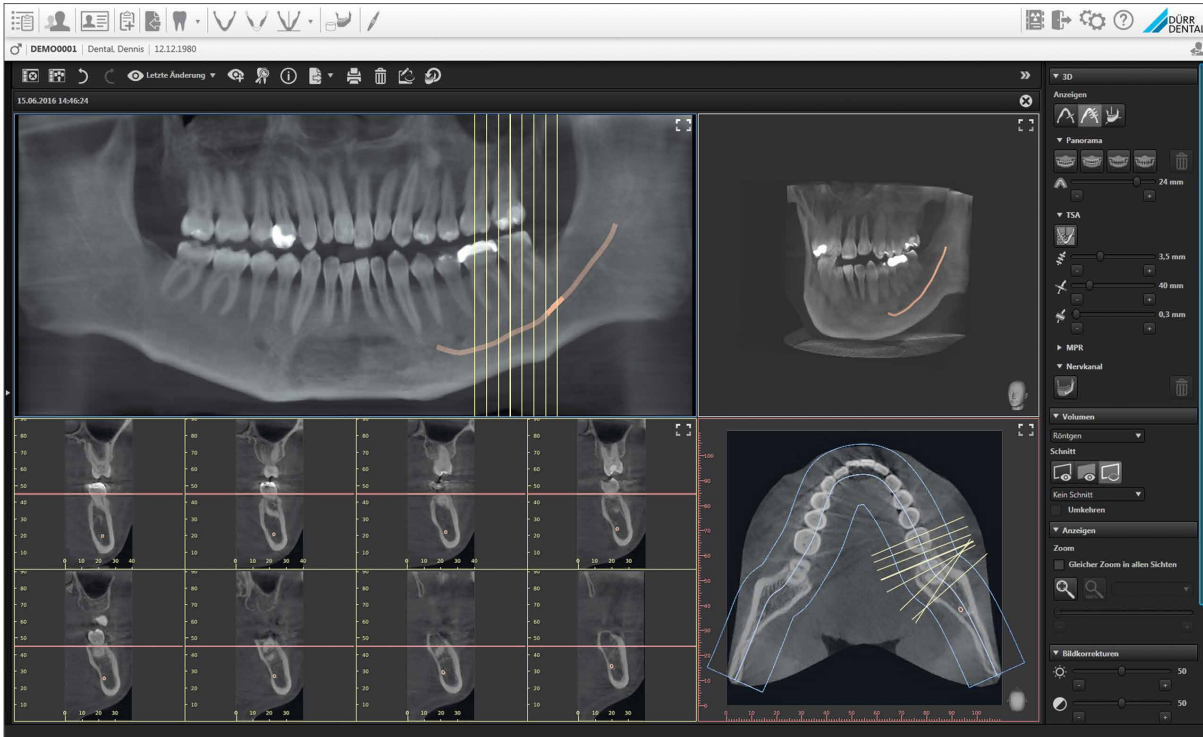
Automated panoramic reconstruction is just one click away

The rendered OPG view makes it easier to navigate in the 3D volume. The panoramic curve required for this is automatically positioned by VistaSoft. A slider is used to select the required layer thickness.

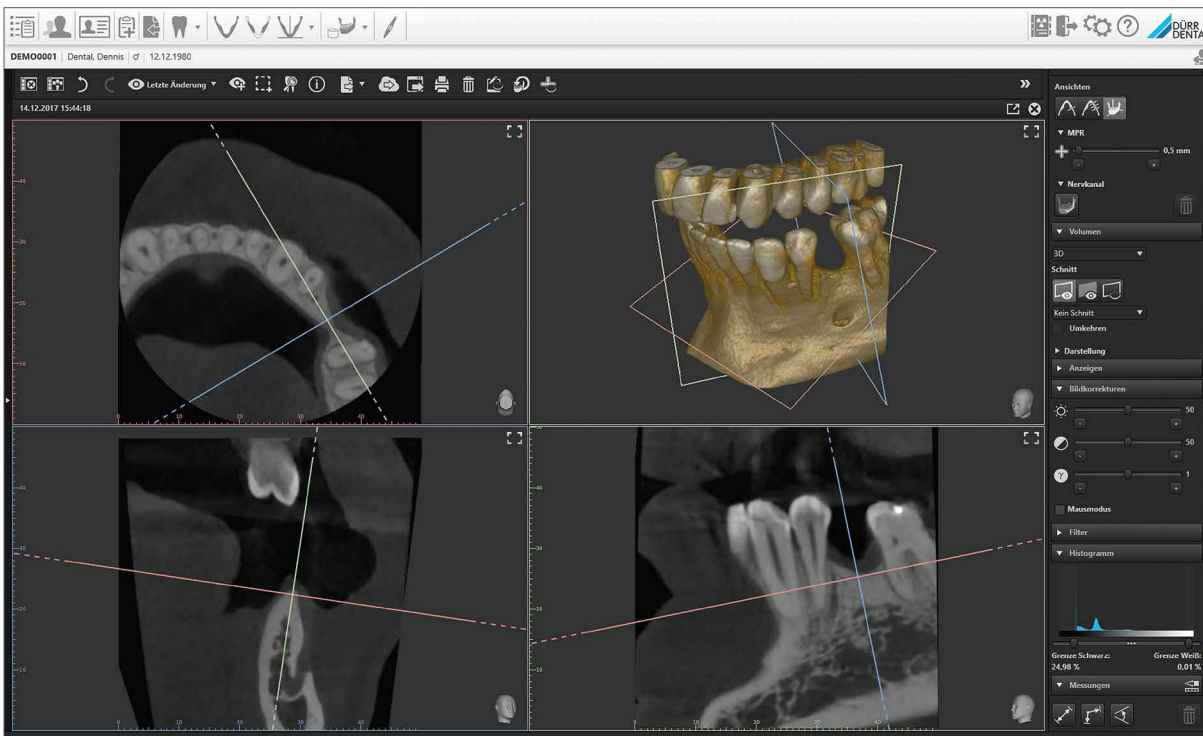
VistaSoft is networkable and compatible with all current X-ray, scanner and camera systems from Dürr Dental. Thanks to VistaSoft MobileConnect and the optional 'Imaging App', the image data can be called up at any time and in any place via an iPad.

VistaSoft – key features:

- One-click principle – all of the main functions are only one mouse click away
- Self-explanatory icons for intuitive operation
- Ergonomic design with simple and well thought-out workflows for efficient operation
- Modern saving concept – changes are saved automatically
- Easy to draw the nerve channel into the image
- Implant and drill template planning
- Export and import of 3D-DICOM data



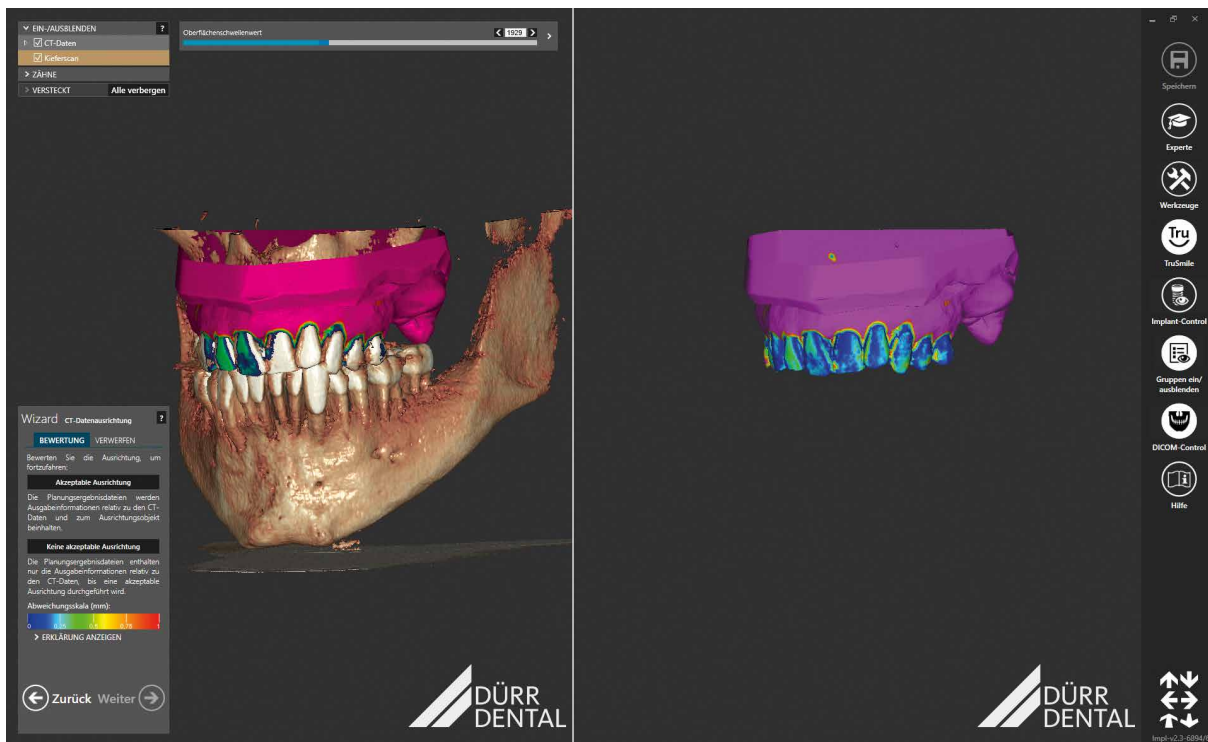
With VistaSoft you can comfortably display the mandibular canal and check its correct course via the transversal layer images (TSA view).



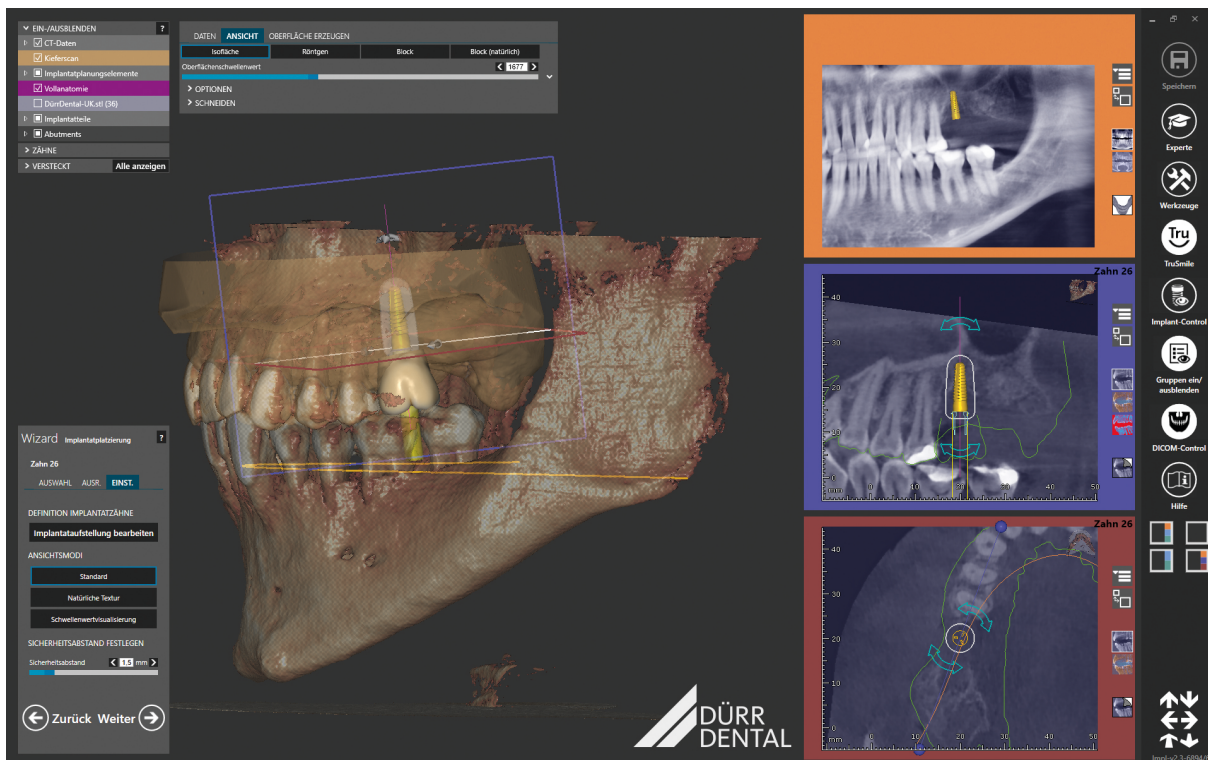
Implant planning with a 5 x 5 volume image. Shown here in the MPR view.

Comfortable 3D implant planning with VistaSoft Implant

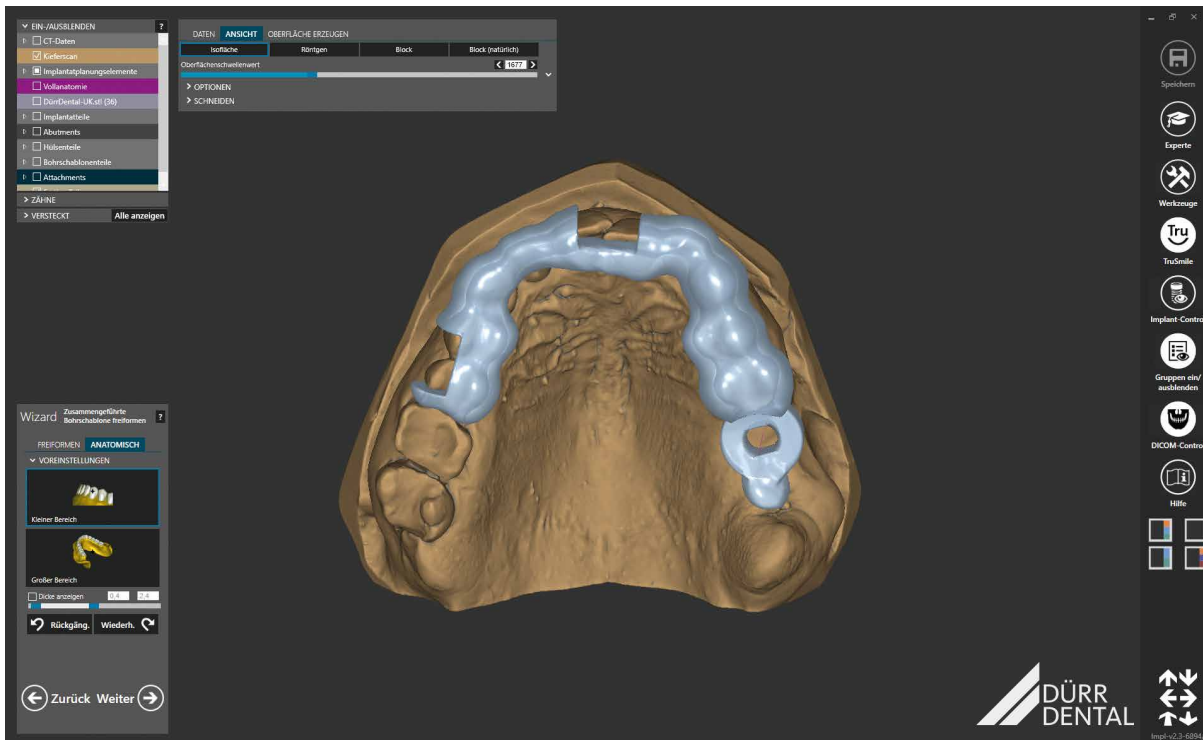
With VistaSoft, among its many other functions your practice has access to a state-of-the-art tool for complete pre-surgical implant planning. With the new VistaSoft Implant module you can map the entire digital workflow.



Automatic optimisation of the matching of intraoral impressions and CBCT



Intuitive and efficient implant planning



User-friendly drill template planning

Easy and reliable implant planning

In VistaSoft Implant you can carry out the entire backward planning – from the crown to the actual implant – within a completely guided workflow, allowing you to plan simply and reliably. The data generated here can then be exported as an open source STL file and shared with other steps in the process.

Simple design of drill templates

VistaSoft Guide will guide you reliably and comfortably through the planning of your drill template. A guided workflow ensures intuitive handling in the process, keeping your work fast and efficient at all times. The drill template data is then saved in an open source STL format and can be forwarded directly to the laboratory or to a 3D printer.

VistaSoft Implant & Guide – key features:

- Reliable and efficient implant planning
- Simple matching of optical scan data and 3D data
- Easy planning thanks to the guided workflow
- Planning of drill templates
- Straightforward exchange of data thanks to the open source STL files

The modules of VistaSoft at a glance:

- VistaSoft Basic: viewing images
- VistaSoft X-ray: acquisition and editing of X-ray images
- VistaSoft Video: VistaCam functions
- VistaSoft Implant & Guide: implant and drill template planning
- VistaSoft Cloud: safe sharing of image data
- VistaSoft MobileConnect: iPad connection
- VistaSoft Inspect: inspection tool for acceptance tests and consistency checks, as well as for monitor tests and image plate quality checks

Figures, data and facts at a glance

VistaVox S

X-ray HV generator

Voltage, current	50-99 kV, 4-16 mA
Rated power	1.6 kW

Tube

Focal point	0.5 mm (IEC60336)
Total filtration	2.8 mm AL

Image detector

Type	CsI CMOS photodiode array
Pixel size	49.5 μ m
Active sensor surface	135.8 x 36.4 mm

Scan times

Scan times	From 2 to 18 secs.
------------	--------------------

Panoramic programs

Panoramic image acquisition	17
Programs for children*	4

Magnification factor

2D images	1.26
-----------	------

3D volume

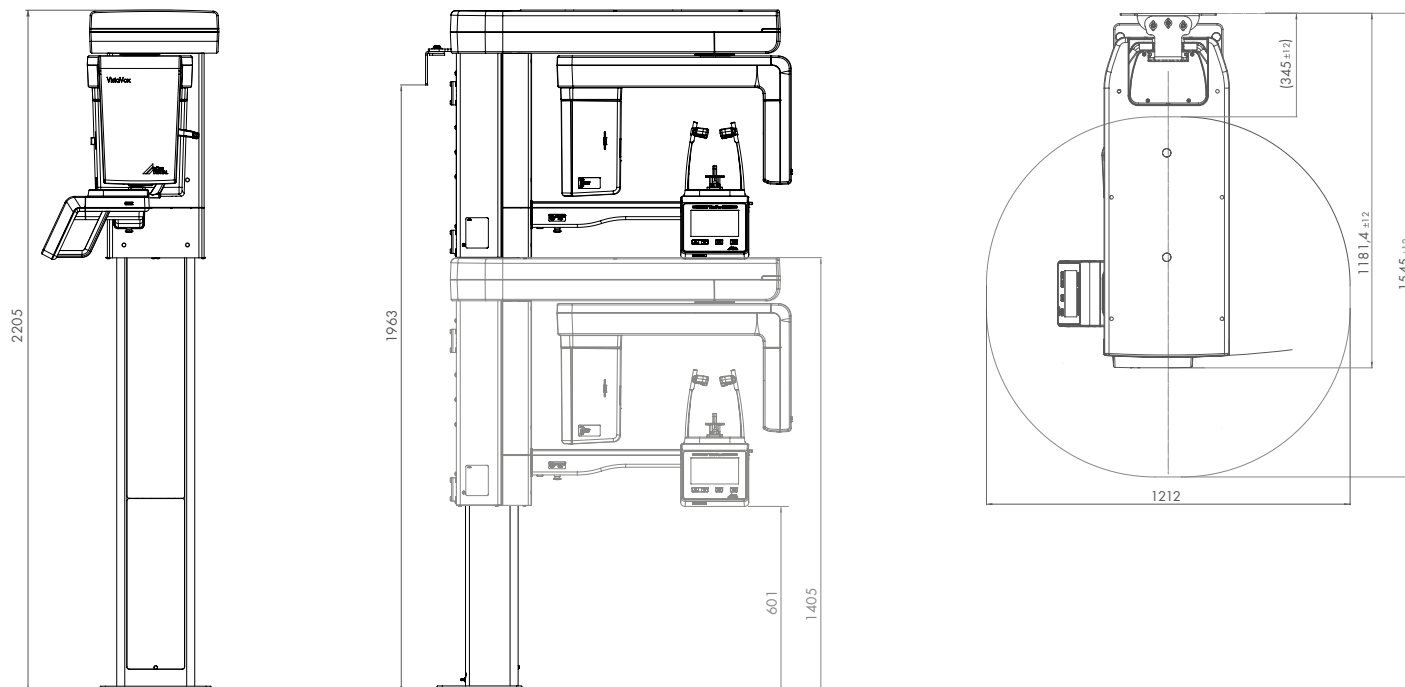
Ø 130 x 85 mm diagnostic
Ø 130 x 70 mm diagnostic
Ø 50 x 50 mm

Unit dimensions

Height	1,406-2,206 mm
Weight	180 kg
Height adjustment range	800 mm
Width x depth	1,212 x 1,545 mm
Installation	Wall mounting

Electrical connections

Mains voltage	200-240 VAC
Frequency	50/60 Hz
Rated power	170 W, maximal 2,2 kVA



*Programs for children: for children and adolescents from 7 years on.

VistaVox S-Ceph

X-ray HV generator

Voltage, current	60-99 kV, 4-16 mA
Rated power	1.6 kW

Tube

Focal point	0.5 mm (IEC60336)
Total filtration	2.8 mm AL

Image detector

Type	Csl CMOS photodiode array	
Pixel size	49.5 μ m	100 μ m
Active sensor surface	135.8 x 36.4 mm	157.2 x 16.3 mm

Magnification factor

2D images	1.26	1.15
-----------	------	------

Scan times

Scan times	From 2 to 18 seconds for lateral head images; in quick scan mode: 1.9 seconds (line scan)
Ceph programmes	

Panorama and Cephalometric programs

Panoramic image acquisition	17
Programs for children*	4
Cephalometric programs	6

3D volume

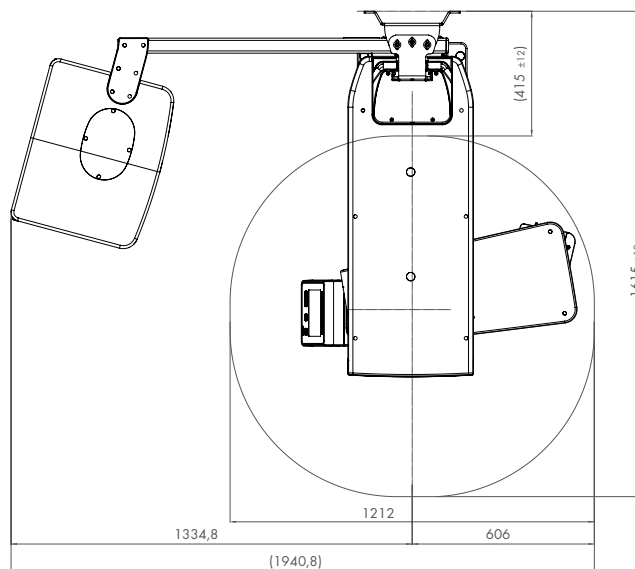
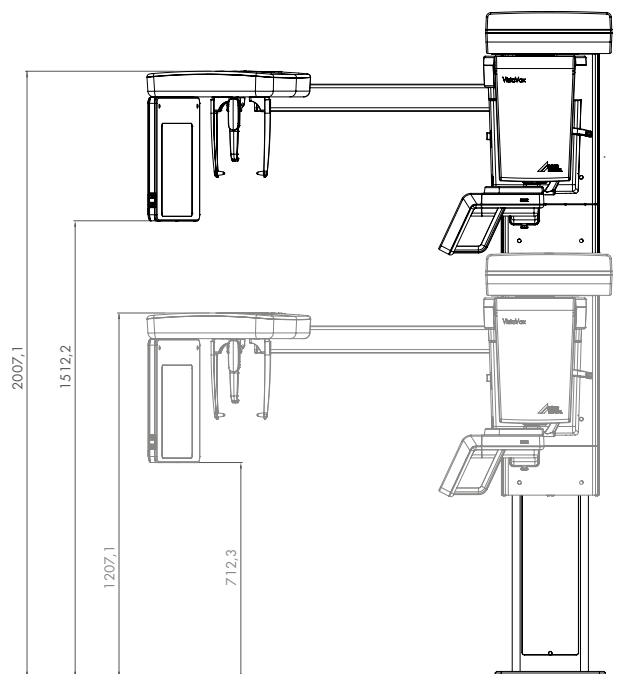
\varnothing 130 x 85 mm diagnostic
\varnothing 130 x 70 mm diagnostic
\varnothing 50 x 50 mm

Unit dimensions

Height	1,406-2,206 mm
Weight	202 kg
Height adjustment range	800 mm
Width x depth	1,941 x 1,615 mm
Installation	Wall-/ foot mounting (Base with wallmounting optional)

Electrical connections

Mains voltage	200-240 VAC
Frequency	50/60 Hz
Rated power	170 W, maximal 2,2 kVA



VistaVox S is manufactured using state-of-the-art technology at our Gechingen site in the Black Forest, Germany. This enables us to ensure the high quality and reliability of the device.



Want to know more?

» www.duerrdental.com



duerrdental.com/news



VistaScan



VistaIntra



VistaPano



VistaVox



VistaCam



VistaRay



VistaSoft



Accessories