X-VIEW 3D PAN TECHNICAL CHARACTERISTICS

SYSTEM SUPPLY	
Line Voltage	115 V/230 V ± 10%
Frequency	50/60 Hz
Electric current	7.5 A @ 230V
Absorbed power	1720 VA @ 230V @ 50/60Hz
High voltage	61 to 85 kVp, at steps of 3 kVp (9 steps)
Anodic current	5 to 10 mA, according to R'20 scale

X-RAY GENERATOR	
Model	P00-06-01
Type	High frequency generator, DC
Manufacturer	Trident S.r.l. Via Artigiani 4, Castenedolo, 25014 (BS) Italy
Tube Voltage	85 kVp
Precision kVp	± 8 %
Maximum Anodic current	10 mA
Anode current accuracy	± 10%
Radiation Output linearity	< 0.2 IEC 60601-2-63 paragraph 203.6.3.1.101
Duty cycle	Adaptive Duty cycle according to the exposure and dielectric oil temp. Minimum 1:8, average 1:16
Transformer Isolation	Oil bath
Nominal power	850 VA (85 kVp - 10 mA)
Total filtration	2.5 mm Al eq. @ 70 kVp
Half Value Layer (HVL)	> 2.0 mm Al eq. @ 61 kVp > 2.7 mm Al eq. @ 73 kVp > 3.05 mm Al eq. @ 85 kVp
Cooling	As per convection
Focal spot	0.5 mm (IEC 60336:2005)
Leakage radiation at 1 m	< 0.5 mGy/h @ 85 kVp - 10 mA – 3s duty cycle
Max thermal capacity of tube head	900 kJ
Exposition parameters regulation	kVp: From 61 to 85 kVp, steps of 3 kVp mA: From 5 to 10 mA, R'20 scale

X-RAY TUBE	
Model	OPX 105
Nominal Focus size	0.5 IEC 60336:2005
Inherent filtration	0.5 mm Al eq.
Anode angle	5°
Anode material	Tungsten
Maximum Nominal voltage	105 kVp
Nominal reverse tension	136 kVp
Maximum filament current	4 A
Maximum filament tension	8 V
Anode's thermal capacity	30 kJ
Maximum anodic dissipation	250W

FLAT PANEL	
Manufacturer	Teledyne Dalsa
Model	Xineos 1313
Type of sensor	CMOS
Sensitive area	13 x 13 cm
Pixel dimensions (L=H)	100 µm elementary, 200 µm in binning 2x2
Number of Pixel (H x L)	1300 x 1300
Scintillator	CsI
Dynamic range	14 bit (16384 grey levels)
Operating temperature	10 to +40° C
Storage temperature	-10 to + 55° C
Reconstructed Volume (Diameter x Height)	166µm

CEPH SENSOR	
Type of sensor	One Shot Phosphor Digital Sensor , (CR) with integrated reading and erasing for cephalometric images
Phosphor composition	BaSrFBr:Eu
Luminescence	400nm
Pixel dimensions	117 µm
Active Area Dimensions	30 x 24 cm
Image format	30 x 24cm and 24 x 24cm
Image dimensions (pixel)	2560 x 2048 for 30 x 24 cm image format

CENTERING LASER	
Wavelength	650 nm ± 10 nm
Divergence	< 2.0 mRad
Optical power	< 1 mW
Classification	Class 1 according to IEC 60825-1

PROGRAMS	
Standard Programs	Adult/Child Standard Panoramic Adult /Child Right Hemi Panoramic Adult/Child Left Hemi Panoramic Frontal Dentition TMJ closed mouth TMJ open mouth Sinus
Ceph Programs	LL CEPH 30 x 24 AP CEPH Carpus
Optional Programs	Adult/Child Reduced Dose Panoramic Adult/Child Improved Orthogonality Panoramic Right Bitewing Left Bitewing Right and Left Bitewing

EXPOSURE TIME	
Adult Standard Panoramic	15.5
Child Standard Panoramic	14.8
Adult Right/Left Hemi Panoramic	8.4
Child Right/Left Hemi Panoramic	8
Adult Reduced dose Panoramic	12.1
Child Reduced dose Panoramic	12.1
Adult Improved Orthogonality Dentition	12.8
Child Improved Orthogonality Dentition	12.1
Adult Right/Left Bitewing	3.0
Frontal Dentition Adult/Child	4.4
Child Right/Left Bitewing	2.4
Adult Bitewing right left	6.0
Child Bitewing right left	4.8
TMJ open/close mouth	1,7 seconds for right / left side joint with open / closed mouth. 6,8 seconds in total.
SINUS	12.1
Exposure times accuracy	± 10 %
Cephalometric (CEPH)	Variable exposure time as a function of the value of the current time * selected time.

	Minimum 2 mAs, maximum 30 mAs
Volumetric 3D Exams	10 seconds for dentition and 3D sinus, 9,7 seconds for right / left TMJ

IMAGES ENLARGEMENT	
Adult/Child Standard Panoramic	1: 1.28
TMJ open/close mouth, 4 images	1: 1.25 (nominal)
CEPH	1: 1.10 on the median sagittal plane projection in LL (Latero-lateral)Not quantifiable in projection AP (Antero – Posterior)
Carpus	Not quantifiable enlargement

ENVIRONMENTAL CONDITIONS	
Minimum room size	L x P x H: 120 x 120 x 240 (cm)
Maximum operating temperature ranges	+ 10° to + 40°
Operating relative humidity range	30% to 75%
Operating atmospheric pressure	80 to 106 Pa(maximum higher ≤ 2000 m)
Transport and storage temperature	- 20° to + 70°
Transport and storage Maximum relative humidity	< 95% not condensed
Transport and storage Atmospheric pressure	63 to 106 Pa

COMPUTER SPECIFICATIONS	
Model	Personal Computer Intel Core i5 3.2 GHz
RAM	8 GB DDR3
HDD	1TB SATA
OS	Windows 7 Pro/8.1 Pro
Graphic Card	ATI 5450 1GB
Monitor	1024x768 pixels at 65.000 colors (ideal 1280x1024 16 million of colors 32 bits)
Network Card	2 x Network card Intel Pro 1000 server (no ceph option) 3 x Network card Intel Pro 1000 server (with ceph option)

IMAGE ACQUISITION SOFTWARE	
Name	DEEP-VIEW
Type of license	FULL FIRST LICENCE USB KEY MONO-USER
Functions	The acquisition software DEEP-VIEW provides many image manipulation functions, including: PAN and/or multi image visualization. Enlarging images with dynamic zoom and scroll. Flip and rotate images. Change of brightness and contrast. Application of median, logarithmic, noise reduction dynamic and spatial filters. Edit of LUT (look up table) and range (grayscale compression). Inversion of the gray scale (positive / negative). Application of special filters such as exclusive harmonizer that optimizes the display of all the densities on the image. Display of histograms and representation of densitometric profiles. Insertion of anatomical references according to international numbering. Linear and angular dimensions measurement with the possibility of dedicated calibration. Printing of images with or without comments and measurements. Database.
Integration with implant planning software	DEEP-VIEW can be integrated with implant surgery programming software, up to export and import of STL files for guided surgery.