IMAGING RX DC X-VS X-VS E

THE PERFECT DIMENSION OF IMAGING

cefla
Making Your Life Better.

BU Medical Equipment
Sede Legale Ed Amministrativa
Headquarters
CEFLA s.c. - Via Selice Provinciale, 23/a - 40026 Imola (BO) - Italy
Tel. +39 0542 653111
Fax +39 0542 653344

Stabilimento
Plant
CEFLA s.c. - Via Bicocca, 14/C - 40026 Imola (BO) - Italy
Tel. +39 0542 653441
Fax +39 0542 653601

CASTELLINI.COM

CASTELLINI.COM

CA
CASTELLINI
PASSION FOR DENTISTRY SINCE 1935

IMMEDIATE DIAGNOSIS, EXCELLENT RESULTS

The RX DC is a versatile, user-friendly X-ray unit, capable of producing high quality imaging thanks to cutting-edge technology. It also maximises working comfort while ensuring low X-ray doses for the patient and maintaining ultra-high performance.

The RX DC, in fact, uses a constant potential high frequency (DC) generator and a very small focal spot (0.4 mm) that provides sharp, detailed images. Automatic exposure parameter modulation and accurate power selection make the RX DC the perfect X-ray unit whatever the situation, personalised according to the patient's build and the specific region of investigation. The RX DC is the perfect X-ray unit, capable of combining high quality imaging and a versatile, ergonomic design with low patient doses.

BLURRING DETECTOR

FOCAL SPOT 0.8 MM

DETECTOR

DEFINITION DETECTOR

FOCAL SPOT 0.4 MM

DETECTOR

MINIMUM DOSE, HIGH DEFINITION, HIGH FREQUENCY RX DC X-RAY UNIT

The RX DC increases X-ray parallelism: thanks to the incorporated collimator the RX DC can achieve a source-to-skin gap of 30 cm. Sharp edges, clear images and precise detail, all while keeping patient doses low. Ergonomic design, offers simplicity and reliability thanks to solid arms with an integrated self-balancing system. Arm and tube head positioning is comfortable and stable. The protractor with graduated scale allows easy positioning.

MAXIMUM VERSATILITY AND MOBILITY

The RX DC is now even more practical and versatile, wall-mounted with 6 variable positions - 3 extensions available in the following lengths: 40, 60 and 90 cm - or, thanks to the cart, it can easily be moved around for use in different areas of the surgery. One X-ray unit for all your needs.

COLLIMATOR CONES

With the built-in collimator cone, a focus-skin distance of 30 cm can be reached. The optional rectangular cone further reduces the body area exposed to X-rays.
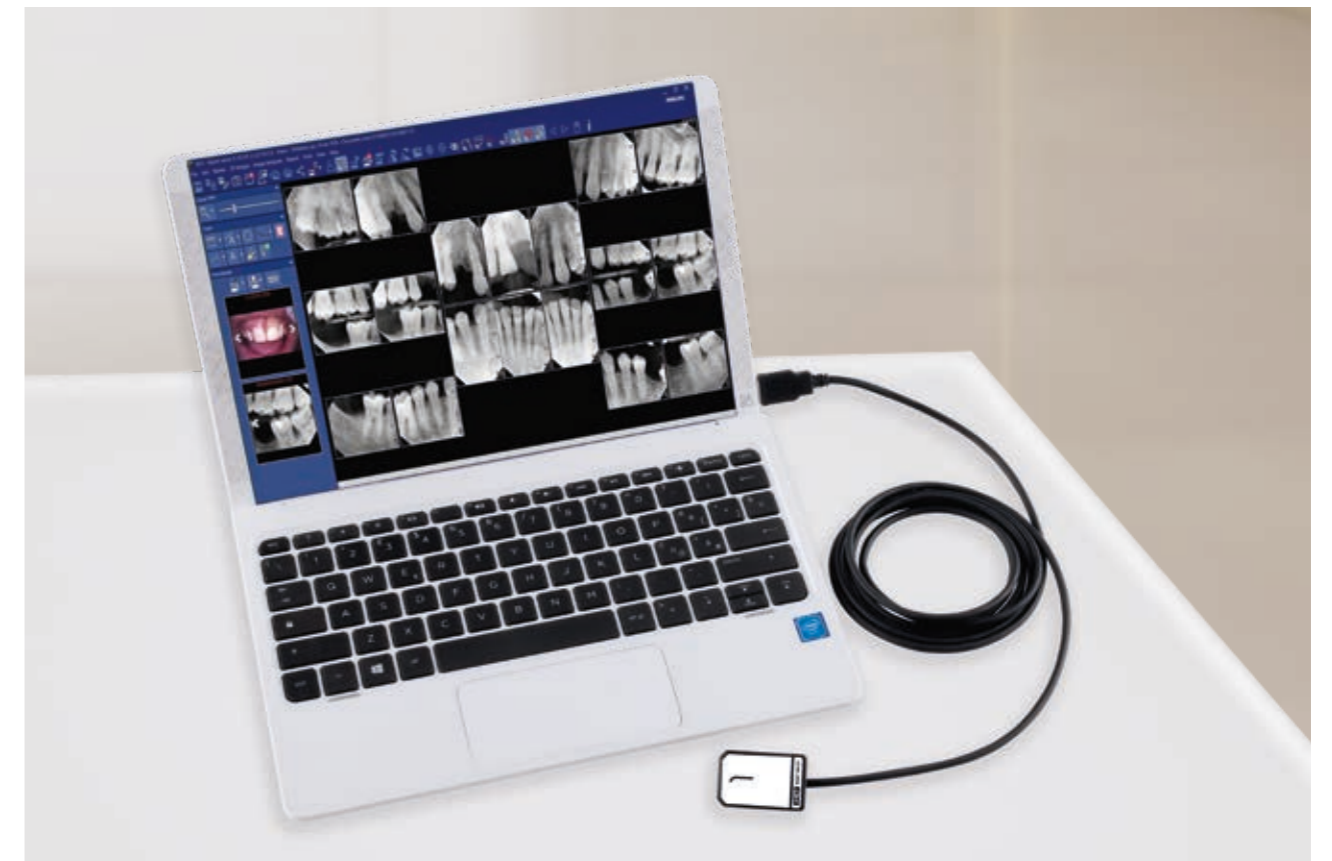
USER-FRIENDLY CONTROL

Simple, user-friendly handheld unit, can be used to select the most suitable programme and ensure perfect X-ray acquisition. Moreover, thanks to the fast Dynamic Duty-Cycle, it is possible to keep tube temperature under control and check - in real time - the exact administered dose.
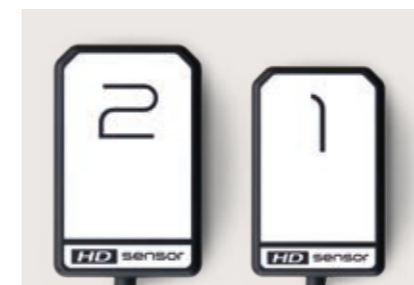
CUSTOMISED CLINICAL IMAGE IES - MULTILEVEL

Innovative ergonomics, direct USB plug-and-play connection, high definition and immediate results make the X-VS with X-ViSUS HD technology the most advanced and suitable sensor for your surgery. Simplicity of use and image acquisition - combined with advanced real-time digital technology - improve quality of work. Impact-resistant, dust-resistant and certified IP67 (water-resistant), the X-VS - X-ViSUS HD technology can be used with all X-ray systems. The X-VS - X-ViSUS HD technology uses iRYS, the all-in-one software for diagnostics, communication and management of intraoral imaging which allows flawless storage, processing and printing of images in perfect synergy with any other devices already in the surgery.

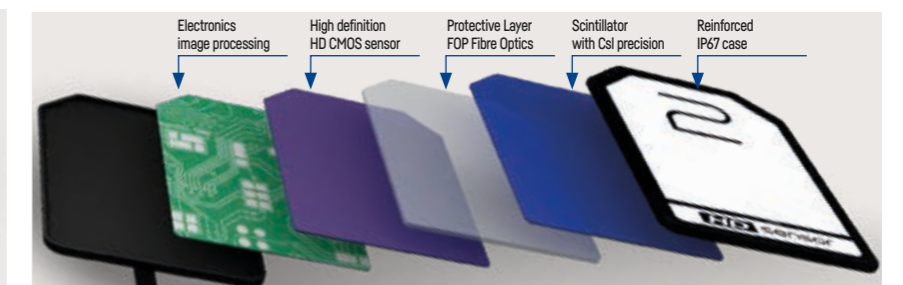## CASTELLINI IES FILTERS (IMAGE ENHANCEMENT SYSTEM)

Latest-generation X-VS image processing software aims to improve diagnostics. With excellent image resolution and a user-friendly software interface, X-VS makes reading intraoral images simpler and easier. The new CASTELLINI iES (Image Enhancement System) filters are the result of research that focuses on dentists' real needs. By using proprietary algorithms optimised for the X-VS sensor, dentists can simultaneously capture, display and share a set of Multi Level images (up to 5). Each image is the result of a different improvement designed to highlight various anatomical details with different levels of sharpness. Dentists can customise image contrast to suit their diagnostic or visual preferences, allowing improved diagnosis. Afterwards, favourite settings can be rendered automatic.

Equipped with advanced iRYS software, the X-VS now offers the versatile MultiLEVEL function, which lets users pre-set the image processing filters displayed in Multi Level. Users can select which filters to use from among the pre-set families and define any further customisations, all from the iRYS image display window. This provides individual dentists with a customised comfort zone for every appointment.

MADE-TO-MEASURE SENSOR

X-VS - X-ViSUS HD technology allows users to choose between two sensor sizes; these make it more adaptable to the dimensions of the patient's oral cavity. Outstanding positioning comfort thanks to rounded corners; high performance, compact design and a maximised active area.

LATEST-GENERATION HD SENSOR

4-layer sensor with an additional protective layer to provide sharp, high-contrast images. Caesium Iodide (CsI) scintillator made up of column-like micro-structures that preserve image quality; it first intercepts the X-ray beam and converts it into visible light. The Fibre Optics Plate (a layer of fibre optics) collimates the radiation onto the sensor and protects it against direct X-ray penetration. The high definition (CMOS HD) acquisition device and on-board electronics convert the light into a digital image with 16,384 grey levels.

Electronics image processing | High definition HD CMOS sensor | Protective Layer FOP Fibre Optics | Scintillator with CsI precision | Reinforced IP67 case

X-VS E, COMFORT AND PERFECT POSITIONING

IP68
With an Ingress Protection (IP) rating of 68, X-VS E is completely impermeable to liquids and dust.

A MUST-HAVE FOR YOUR PRACTICE

X-VS E is available in two sizes, both of which have a thin profile to maximise patient comfort at all times. The profile also ensures easy positioning by the user and optimal framing of the area of interest. Improved sensitivity and special filters in the software ensure high-definition images.
Together with the sensor, Castellini supplies alignment devices for every type of dental examination.

LOW CONSUMPTION, PERFECT WORKFLOWS

The USB cable features a stabiliser that prevents overheating of the sensor: this allows prolonged operation for the user and minimises any patient discomfort.

ERGONOMICS

X-VS E reduces patient unease and simplifies user workflows as it's just 4.5 mm thick, has rounded corners, smooth edges and a flexible cable.

EXTENSIVE ACTIVE AREA

Both sensor sizes have an extensive sensitive surface area for enhanced imaging of the anatomical area of interest.

CABLE

The 3-metre cable provides outstanding flexibility of movement during the examination and a direct connection with the PC, without any need for an additional control box.

PRECISION DIAGNOSTICS

Choose the highest X-ray quality for fast, secure diagnoses. Ultra-high levels of detail and specific filters applied by the software make X-VS E the ideal dental practice performance enhancement tool.
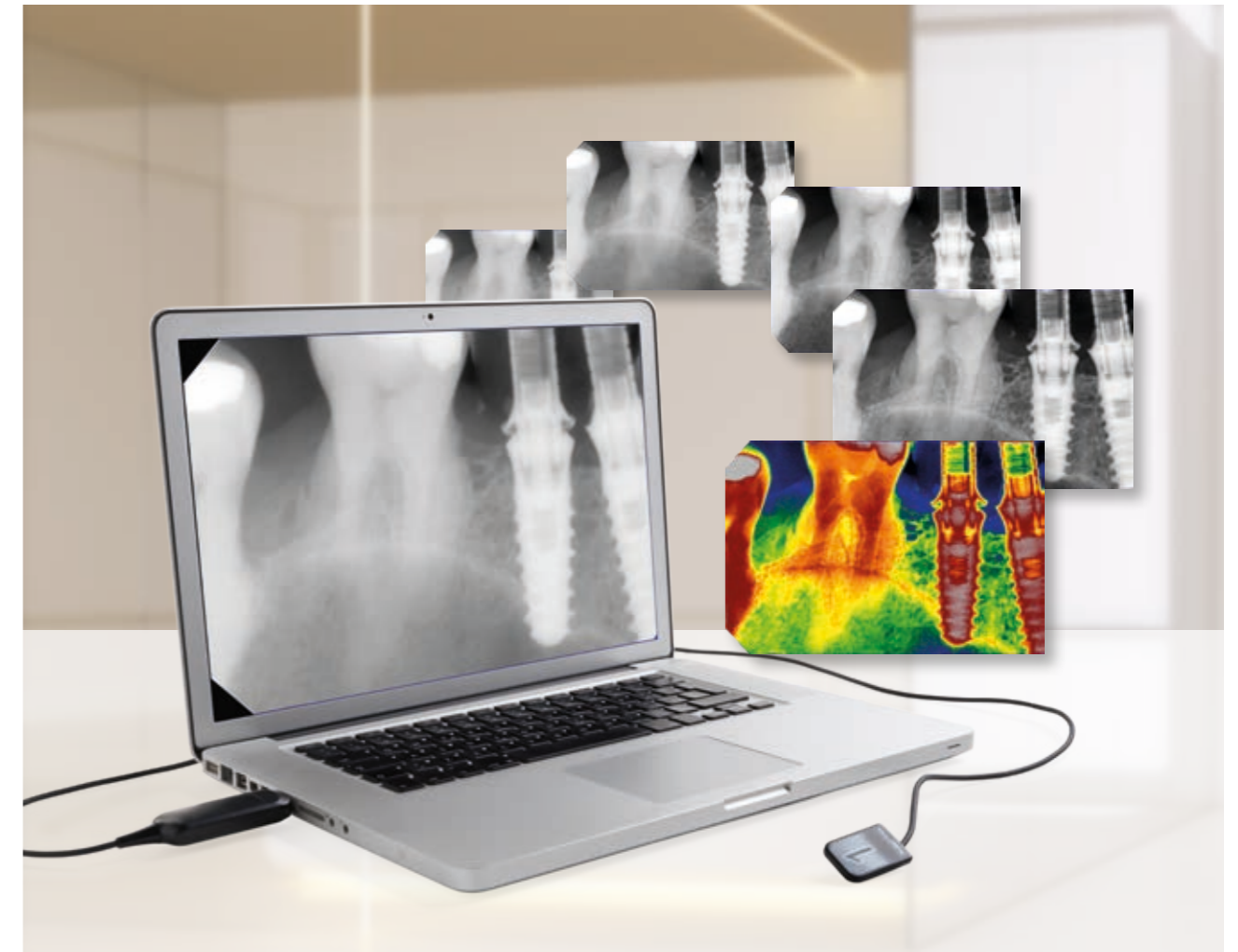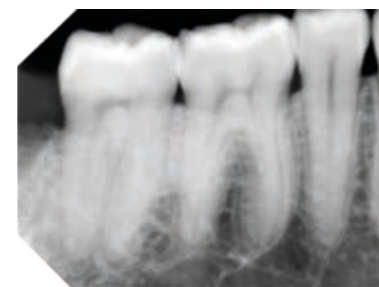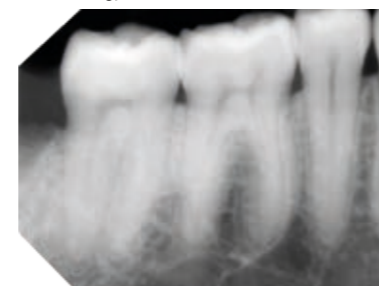

IMAGE QUALITY

Images are extremely sharp, even at low doses. Thanks to the internal CMOS sensor (with 20 μm pixels) and the CsI (Cesium Iodide) scintillator - which ensure greater sensitivity to the X-ray beam - users can display details that would otherwise be imperceptible.
X-VS E therefore ensures both patient safety and optimal imaging yields for clinical purposes. The iCapture acquisition software and iRYS image management software complete the workflow by allowing enhancement, analysis, display and sharing of the X-ray images obtained during the examination.
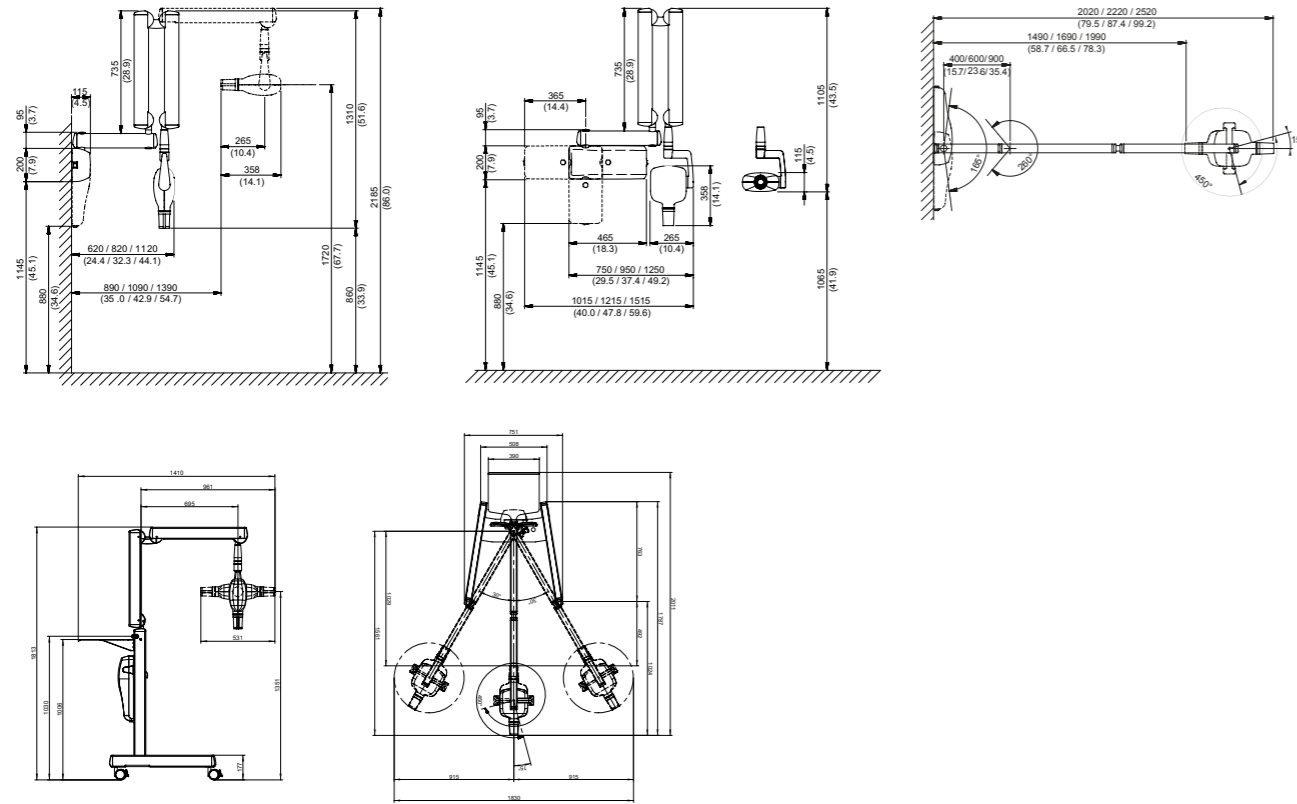

E Technology

Standard

CASTELLINI iES FILTERS

iES filter sets can be applied to X-VS E sensors to provide dentists with different viewpoints of the same anatomical region and identify the best way to display the various diagnostic elements.
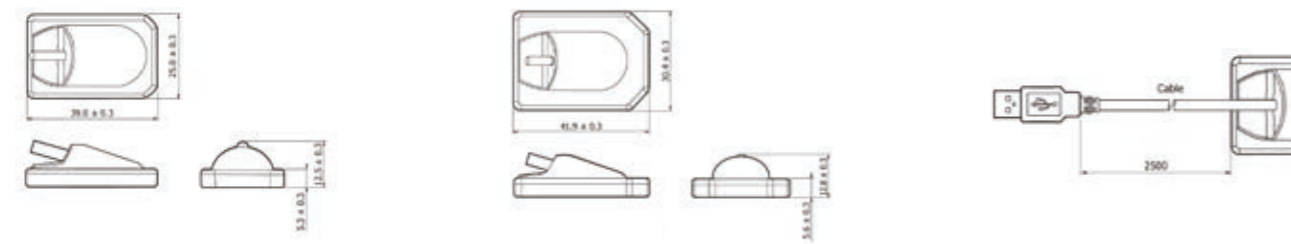
MultiLEVEL

X-VS E also integrates MultiLEVEL technology. This applies proprietary iES algorithms to generate a set of (up to 5) images, each of which emphasises a different anatomical detail by modulating sharpness and contrast.
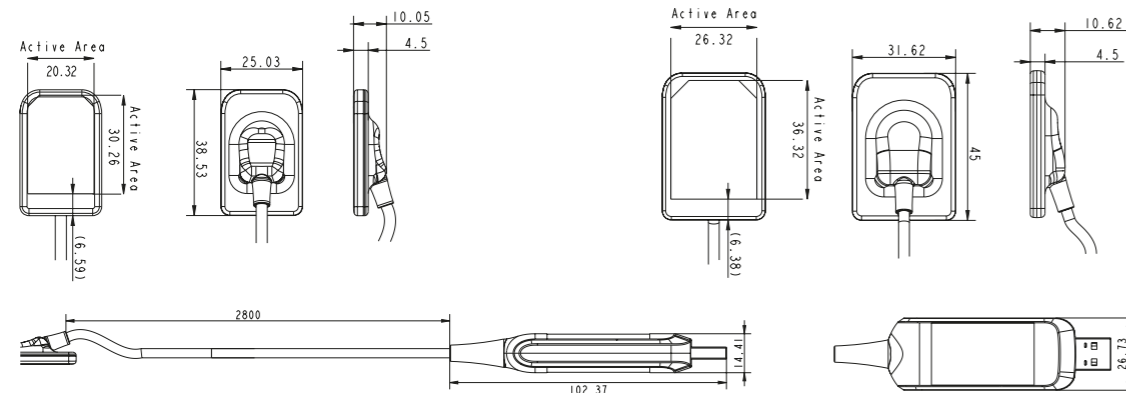
TECHNICAL SPECIFICATIONS

X-VS 1   X-VS 2

X-VS E 1   X-VS E 2

RX DC X-RAY UNIT	
Generator	Constant potential, microprocessor-controlled
Working frequency	145 - 230 KHz with self-adjustment (typically 175 KHz)
Focal spot	0.4 mm (IEC 336)
Total filtration	2 mm @ 60 kV / 2 mm @ 65 kV / 2 mm @ 70 kV (*)
Anode current	4 / 8 mA
Voltage at X-ray tube	60 / 65 / 70 kV (*)
Exposure times	0.020 – 1.000 seconds, R'10 and R'20 scale
Source-skin distance	20 and 30 cm
Irradiated field	Ø 60 mm and Ø 55 mm (with round cone)
Additional collimators	35 x 45 mm (with rectangular cone for size 2 sensors), 31 x 41 mm and 22 x 35 mm, for size 1 and size 0 sensors
Power supply	50/60 Hz, 115-120 V AC ±10% or 230-240 V AC ±10%
Duty Cycle	Continuous operation with self-adjustment up to 1s/90s total
Arms (for Standard version only)	Available in 3 lengths: 40 cm – 60 cm – 90 cm
Max. arm extension	230 cm, from wall
Versions	Standard (wall mounted) or Mobile (on portable cart)

SENSOR X-VS	Size 1 - Regular	Size 2 - Large
External dimensions (mm)	38.9 x 24.9	41.9 x 30.4
Thickness (mm)	5.3	5.7
Pixel matrix	1500 x 1000	1700 x 1300
Pixel size (µm)	20	20
Maximum resolution (lp/mm)	25	25
Grey levels depth	14-bit acquisition - 16384 maximum grey levels	
Scintillator technology	CsI (Cesium Iodide) with micro-columnar structure	
Direct exposure protection	FOP (Fibre Optics Plate)	
Protection rating	IP 67 (Guaranteed against liquid or dust infiltration)	
Compatibility with X-ray generators	Any AC or DC technology X-ray generator with values in the 60 – 70 kV and 1-8 mA range and precision control of exposure times	

SENSOR X-VS E	Size 1	Size 2
External dimensions (mm)	36.8 x 25.4	41.9 x 30.4
Thickness (mm)	4.5	4.5
Pixel matrix	1500 x 1000	1800 x 1300
Pixel size (µm)	20	20
Max. resolution (lp/mm)	25	25
Grey level depth	16-bit acquisition - max. 65,535 grey levels	
Sensor technology	APS CMOS	
Scintillator technology	Direct deposition CsI (Caesium Iodide)	
Case protection rating	IP 68 (Guaranteed against liquid or dust infiltration)	
Compatibility with X-ray generators	Any AC or DC technology X-ray generator with values in the 60 – 70 kV and 1-8 mA range and precision control of exposure times	

X-VS - X-VS E MINIMUM SYSTEM REQUISITES	
Supported operating systems	Microsoft® Windows® 10 Professional 64 bit
Processor	Intel Core 2 Duo / AMD Athlon X2 or later
RAM	4 GB (8GB recommended)
Graphics card	Discrete 3D Video Card or integrated GPU
Display settings	1280 x 1024; 1344 x 768 or greater, 16 million colours
Port	USB 2.0 or later versions
Power supply	5 VDC, 500 mA (via USB)

X-VS - X-VS E SOFTWARE REQUISITES	
Connectivity	Direct USB to PC
Image capture software (for PC)	iCapture with dedicated filters for third party software
Image management software (for PC)	iRYS (as per ISDP©10003:2020 in compliance with EN ISO/IEC17065:2012 - certificate number 2019003109-2) and iPad iRYS viewer app (free)
Supported protocols	DICOM 3.0, TWAIN, VDDS
DICOM nodes	IHE compliant (Print; Storage Commitment, SR document; WorkList; MPPS; Query/Retrieve)

[*] values depend on the country where the product is marketed.