

ORTHOPANTOMOGRAPH® OP200 D ORTHOCEPH® OC200 D

True dynamo leading through the decades.



INSTRUMENTARIUM

You can't duplicate the legacy.

- 1946 Professor Y.V. Paatero publishes his first paper on Panoramic Tomography.
- 1951 "Pantomography" equipment is presented.
- 1961 The first dental panoramic X-ray, ORTHOPANTOMOGRAPH® OP1, is developed.
- 1964 Commercialization of the ORTHOPANTOMOGRAPH® units begins with models OP2 and OP3.
- 1978 ORTHOPANTOMOGRAPH® system becomes the leading name within dental panoramic imaging with models OP5/OC5, OP6 and OP10/OC10.
- 1992 New innovations, such as the lifting cassette head and linear tomography, are introduced along with the OP100 product family.
- 1999 Direct digital ORTHOPANTOMOGRAPH® OP100 product family is introduced.
- 2006 New ORTHOPANTOMOGRAPH® product family OP200 is launched.
- 2007 Volumetric Tomography (VT) is developed to maximize the performance of an ORTHOPANTOMOGRAPH® unit.
- 2009 A new member to the ORTHOPANTOMOGRAPH® product family – OP30 – is launched.
- 2011 CBCT era begins. ORTHOPANTOMOGRAPH® OP300, the most comprehensive 3-in-1 platform is launched to celebrate 50 years of ORTHOPANTOMOGRAPH® success.
- 2013 Introduction of improved 3D image quality, new metal artifact reduction (MAR) tool and endo mode for ORTHOPANTOMOGRAPH® OP300 3D images.
- 2013 New revision of ORTHOPANTOMOGRAPH® OP30 unit is launched.
- 2014 ORTHOPANTOMOGRAPH® OP300 Maxio configuration, offering diagnostic information of the entire maxillofacial region, is launched.



A wise investment for today
– and tomorrow

ORTHOPANTOMOGRAPH® OP200 D unit is a wise investment for today and tomorrow for the most demanding users requiring advanced panoramic imaging system with cephalometric option. All essentials for excellent panoramic and cephalometric imaging are included in OP200 D, starting from the reliable patient positioning and support all the way to the CLINIVIEW™ software that enables making diagnosis efficiently and accurately. OP200 D is the true dynamo of a busy clinic demanding a safe and reliable investment for the future.

A proven leader in panoramic imaging

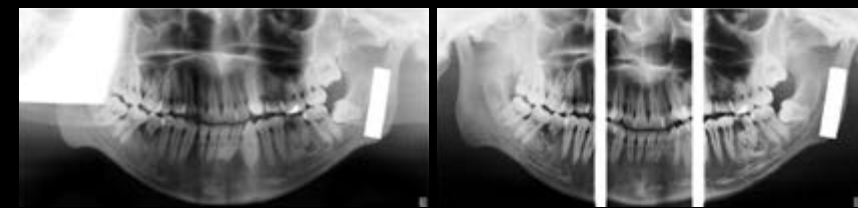
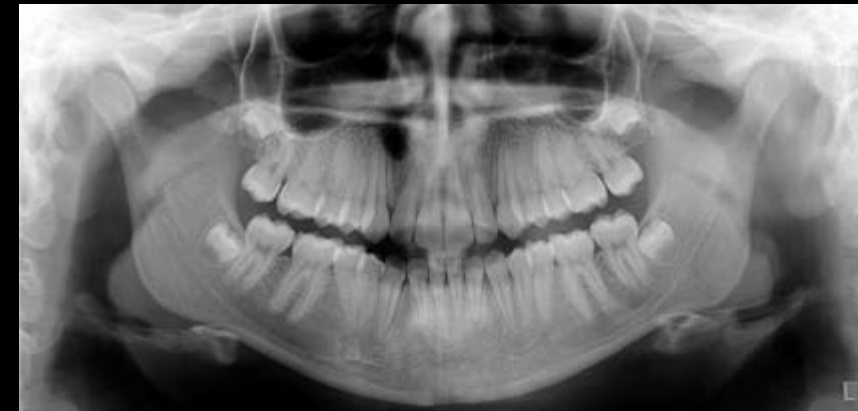
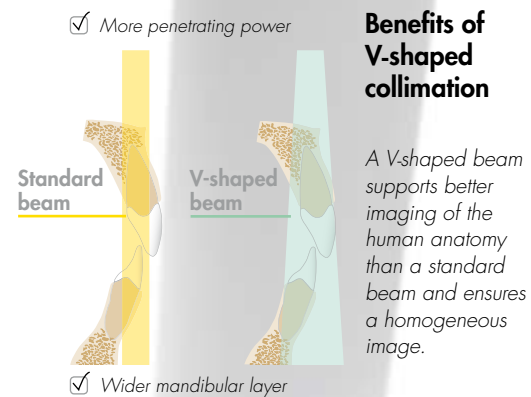
Gold standard image quality – automatically and efficiently

OP200 D combines all elements affecting image quality for users benefit. With sharp and detailed images diagnosing is easy, time after time. Furthermore, OP200 D utilizes dose-controlled Automatic Exposure Control (AEC) to deliver constantly perfect quality images with individually defined exposure values for all size patients.

Accurate and stable patient positioning

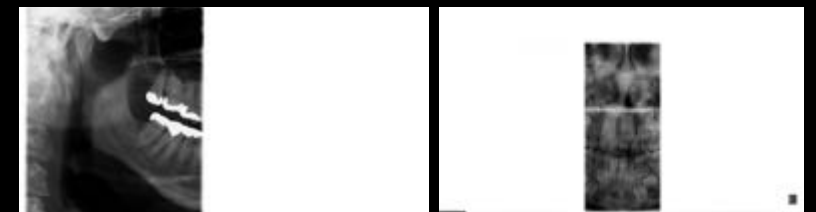
OP200 D follows the ORTHOPANTOMOGRAPH® accurate and stable patient positioning. Correct patient positioning is assured by three positioning laser lights, Frankfurt, midsagittal and occlusion correction lights.

A rigid 5-point positioning system including forehead support, chin rest and bite fork eliminates patient movement. The open design allows easy viewing and positioning of the patient from either the left or right side.



Ortho Zone, before

after



Sectional panoramics

V-shaped beam – clinically proven imaging geometry

The V-shaped X-ray beam adapts to the human anatomy, providing even greater detail and a wider mandibular image layer. The V-shaped X-ray beam also allows for more penetrating power for the thicker maxilla area.

Special geometry

The Ortho Zone program provides a special geometry to solve two common imaging problems: metal artefacts in the molar region of the condyle, and the need for an exceptionally wide anterior layer for patients with malocclusion.

Partial programs – Decrease of dose

When a full panoramic image is not required, 1 to 5 segments of the horizontal image can be selected to expose only regions of diagnostic interest.

ORTHOCEPH® OC200 D

Fully adjustable scanning

OC200 D incorporates an advanced user-adjustable lateral scan method to expose only the desired portion of the skull. This method reduces the scanning time to a minimum of 5 seconds and reduces patient dose considerably. OC200 D uses a patented Automatic Facial Contour (AFC) method for soft tissue enhancement in lateral views. The unit automatically adjusts the exposure values during scanning for better soft tissue definition.



48% to 62% dose reduction



**Only 43–32% dose with
Core Lateral Ceph**



**52–38% dose with
Lateral Ceph standard**



**100% dose, typical full scan
digital cephalostat**

Clinically correct image geometry

In order to produce equal and accurate horizontal and vertical magnification, OC200 D uses a patented method of synchronized tube head horizontal sweep and sensor movements while keeping the focal spot in the same position.

Stable patient positioning

The Frankfurt horizontal plane laser light, nasion support and rigid ear rods with locking system make patient positioning stable and easy.

Perfect fit for your clinic

OC200 D can be set up in your clinic for right- or left-handed cephalometric imaging and is field changeable.

Full range of projections

ORTHOCEPH® patient positioning system provides a variety of imaging projections for cephalometric radiography. It is a comprehensive diagnostic device that includes lateral, facial, posterioranterior and oblique projections, as well as the possibility of hand and wrist imaging.





Boost up usability

SMARTNAV™ – Interactive navigator

In SMARTNAV™ software all information is displayed and described in an intuitive manner. It provides easy selection of imaging programs, arch sections, lateral scanning start position, and more. The user can easily set the desired imaging parameters in SMARTNAV™ navigator.

SMARTPAD™ full-color touchscreen

The large 12.1" SMARTPAD™ touchscreen enhanced by SMARTNAV™ software provides intuitive and easy-to-access user-interface for ultimate experience. SMARTPAD™ touchscreen can be positioned either side of the unit or to the wall.

Patient positioning animations

For ease of use patient positioning animations specific to each imaging program demonstrate the proper patient positioning procedure.

Instant dynamic help

This feature provides quick and convenient information related to the imaging programs, such as the purpose of the program selected.

Operators of the unit may change with time
– **quality** of ORTHOPANTOMOGRAPH® and
ORTHOCAPH® images will not.

Essentials for excellence

The quality of images is a result of many elements. A perfect image is as dependent on good patient positioning and support as technical features of the equipment or specifications of the workstation. ORTHOPANTOMOGRAPH® OP200 D unit combines all possible factors for your benefit to ensure you a perfect image – every single time. ORTHOPANTOMOGRAPH® product family masters the details.

Essentials for excellent panoramic imaging

- Advanced high frequency generator technology, 2–16mA / 57–85kV
- Focal spot: 0.5 mm
- Clinically correct imaging geometry
- Correct beam shape: V-shaped X-ray beam
- Proven CCD technology
- Dose-controlled Automatic Exposure Control (AEC)
- Automatic Spine Compensation (ASC)
- Accurate and stable 5-point patient positioning
- Smooth rotation
- Positioning lights: 3 laser lights
- Professional software tools
- Proper monitor and viewing conditionings: ask for a recommendation from your dealer

Essentials for excellent cephalometric imaging

- Clinically correct imaging geometry
- Powerful tubehead: 2–16mA / 57–85kV
- Fully adjustable lateral scan for fast exposures
- Dose-controlled Automatic Facial Contour (AFC)
- Frankfurt horizontal plane laser light
- Stable patient positioning with ear holder locking
- Professional software tools
- Proper monitor and viewing conditions: ask for a recommendation from your dealer

Imaging programs

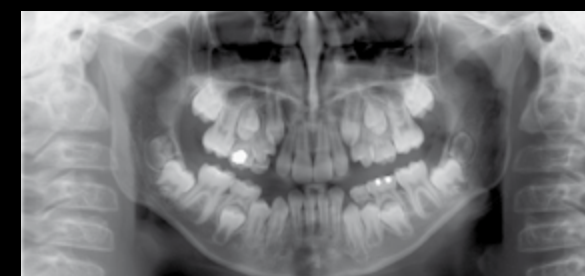
Versatile imaging programs

In addition to the various standard panoramic programs, special imaging programs are available to facilitate easy diagnosis even with difficult clinical conditions.

Panoramic



P1 – The standard adult panoramic imaging program P1 provides crystal clear image..



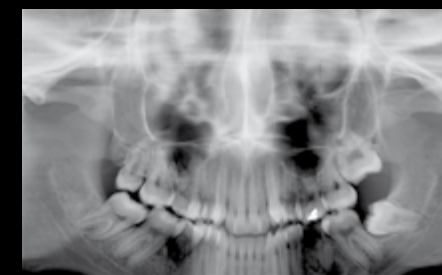
P2 – The pediatric panoramic program has a clinically adapted image layer and reduced image height.



P4 – The Orthogonal program reduces overlapping of the teeth.



P3 – The Ortho Zone provides special geometry for an exceptionally wide anterior image layer.

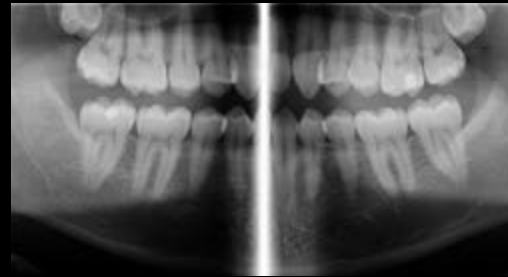


P8 – Sinus maxillary imaging program.

Panoramic



P5 – The Wide Arch program is appropriate for patients with a wider than average dental anatomy.

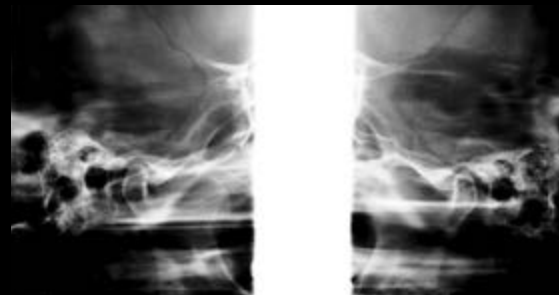


BVV – Bitewing-like view for a quick and easy alternative to intraoral bitewing imaging.

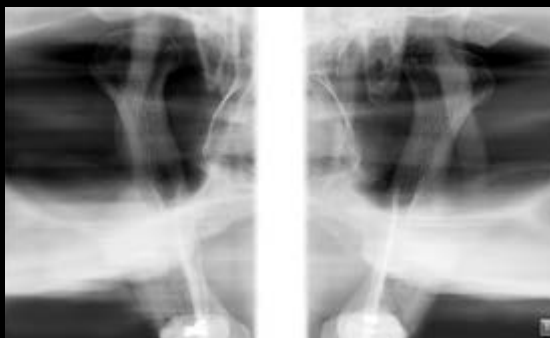
TMJ



P6 – Temporomandibular joint (TMJ) lateral view can be taken with mouth closed or open.

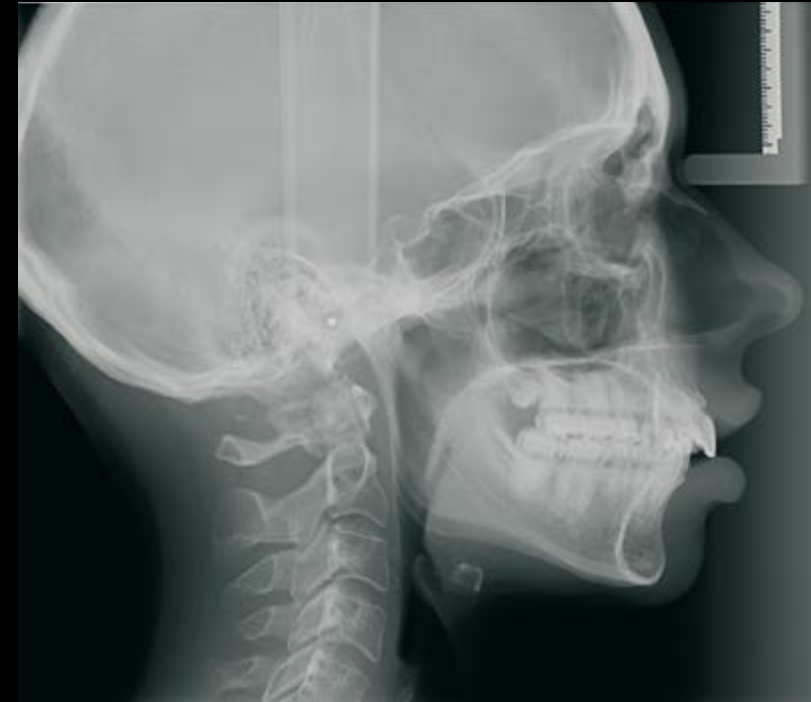


P6 – The standard lateral TMJ program can be replaced with the alternative Ortho TMJ program for obtaining a corrected lateral condylar angle view (optional).



P7 – TMJ PA projection gives clear view of condyles with 1.8 magnification.

Cephalometric



P9 – Cephalostat lateral view.



P10 – The ORTHOCEPH® units patient positioning system enables a variety of imaging projections for cephalometric radiography. It includes facial, posterioranterior and Submentovertex projections among others.



Carpus imaging with cephalostat units. Optional in some markets.

Configurations – OP200 D/ OC200 D



Optional SMARTPAD™ touchscreen is available for OP/OC200 D unit.

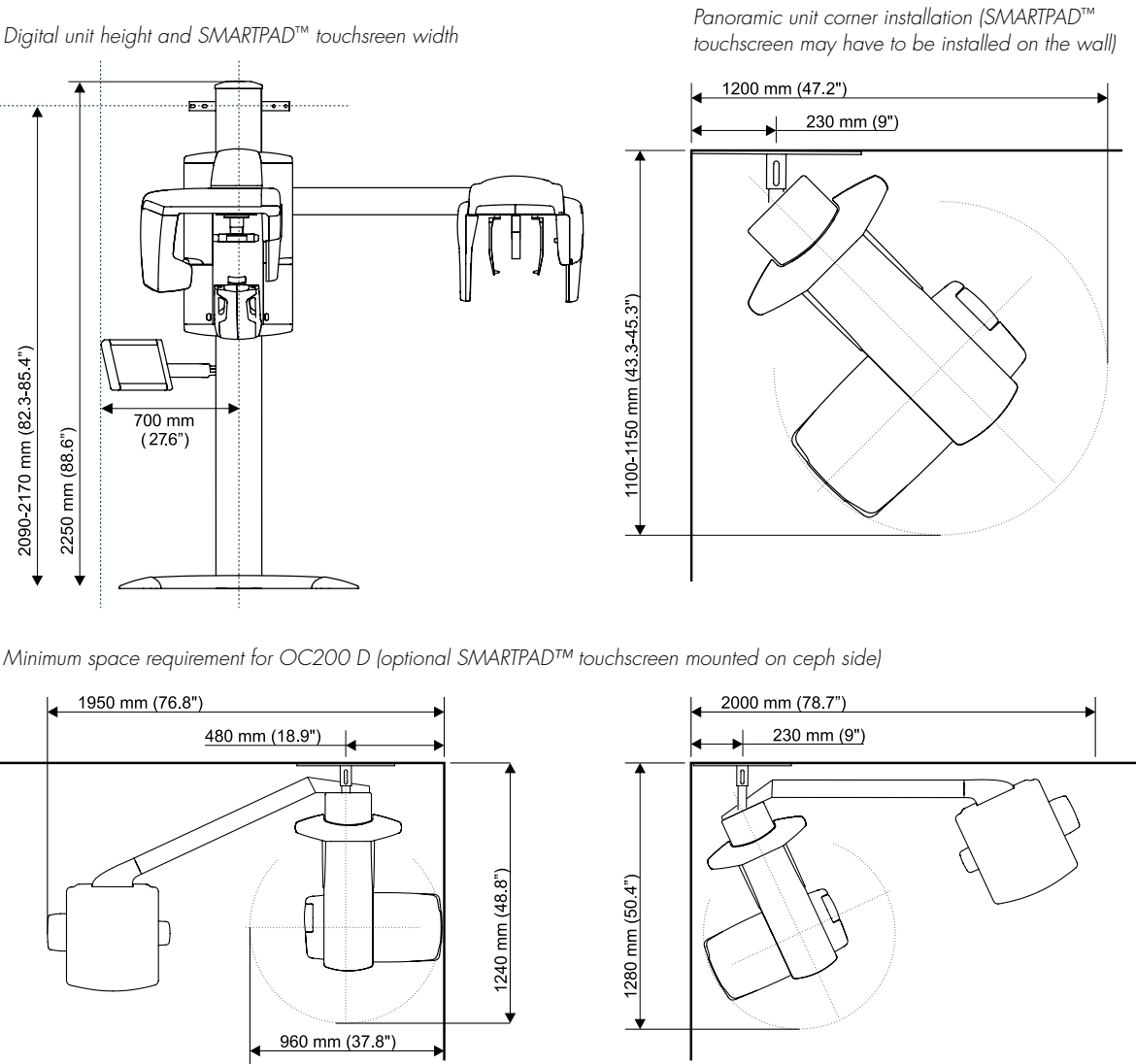


The left-handed digital ceph comes with an additional positioning mirror.



Optional carpus holder for accurate wrist imaging with dental ceph.

Technical specifications & dimensions



| ORTHOPANTOMOGRAPH® OP200 D/ OC200 D Technical specifications* | | |
|---|--|--|
| generator | high frequency DC, 75–150 kHz | |
| X-ray tube | D-051S | |
| focal spot size | 0,5 mm, according to IEC 336 | |
| total filtration | min 2.5 mm Al | |
| tube voltage | 57–85 kV | |
| tube current | 2–16 mA | |
| nominal voltage | 110/230 VAC +/- 10% 50/60 Hz | |
| main fuses | 10 A @ 230 VAC, 15 A @ 110 VAC | |
| power consumption | 2.3 kVA @ 230 VAC, 1.65 kVA @ 110 VAC | |
| | OP200 D | OC200 D |
| patient positioning lights | 3 | 4 |
| nominal magnification | 1.3 | 1.14 (ceph) |
| number of imaging programs | 9 | 12 |
| imaged area variations | 34 | 34+9 |
| exposure time | 2.7–14.1 s | 5–20 s |
| weight approx. | 175 kg/ 385 lbs | 210 kg/ 465 lbs |
| Digital specifications | OP200 D | OC200 D |
| sensor pixel size | 48 x 48 µm | 48 x 48 µm |
| image pixel size | 96 x 96 µm | 96 x 96 µm |
| image field height | 147 mm/ 5.8 inches 120 mm/ 4.7 inches pediatric (P2) | 221 mm/ 8.7 inches |
| PC minimum requirement for image capture | Pentium 4 @2GHz, 1GB RAM, 8GB HDD space, slot for optical adapter card | Pentium 4 @2GHz, 1GB RAM, 8GB HDD space, slot for optical adapter card |
| operating system | Windows 7, Windows Vista or Windows 8 (64-bit) | Windows 7, Windows Vista or Windows 8 (64-bit) |
| DICOM compatibility | optional | optional |
| TWAIN connectivity | optional | optional |
| SMARTPAD™ | optional | optional |
| * Film based OP200 unit available by special request | | |

| Choose your own ORTHOPANTOMOGRAPH® | OP30 | OP200 | OP300 | OP300 Maxio |
|------------------------------------|------|-------|-------|-------------|
| Standard panoramic | • | | | |
| Advanced panoramic | | • | • | • |
| TMJ imaging | • | • | • | • |
| Cone Beam 3D | | | • | • |
| Cephalometric | | • | • | • |

Instrumentarium Dental develops, manufactures and markets high-tech systems and solutions for dental and maxillofacial imaging. We work in close co-operation with dental professionals, universities and other research centers in our quest to develop solutions that will meet and exceed the expectations of our customers. As the establisher of panoramic X-ray imaging, we are committed to providing high clinical performance while still maintaining simplicity, ease of use and workflow efficiency. The Instrumentarium Dental product portfolio consists of a full range of premium quality imaging solutions for intraoral, extraoral and 3D imaging. For more detailed information about our products, please visit **www.instrumentariumdental.com**.

Instrumentarium Dental reserves the right to make changes to specifications and features shown herein, or to discontinue the product described at any time without notice or obligation. Contact your Instrumentarium Dental representative for the most current information. CE marked according to Medical Device Directive (NB 0537). Electrical safety according to IEC 60601-1. Operations comply with ISO 13485:2003, ISO 9001:2008, and ISO 14001:2004.

ORTHOPANTOMOGRAPH®/ORTHOCEPH®/CLINIVIEW™/SMARTPAD™/SMARTNAV™ is a registered trademark of Instrumentarium Dental, PaloDEX Group Oy.



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